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PSYCHOLOGICAL ABSTRACTS

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PSYCHOLOGICAL ABSTRACTS

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GENERAL

1. **Abel, T. M. Washburn's motor theory: a contribution to functional psychology.** *Amer. J. Psychol.*, 1927., 39, 91–105.—Washburn's motor psychology offers an hypothesis as to the rôle played by the musculature in the various psychological functions. It can be verified empirically and experimentally in a number of ways, for movements can be observed with the naked eye, recorded on instruments or described by the subject. When Washburn refers to the processes of the "mind" she does not mean psychological experience taken structurally, but rather functionally. When she speaks of sensations of objects, of mental images, of emotions, of the problem-idea as a sustained state of consciousness, of judging and reasoning as the processes of thinking, Washburn has left the realm of structural description and entered the field of the functional psychologist, whose task it is to describe the modes of performance of the total organism.—*G. J. Rich* (Bellevue Hospital).

2. **Bechterew, W. Die kollektive Reflexologie. (Beiträge zur Massenpsychologie.)** (Collective reflexology. Contributions to group psychology.) Halle: C. Marhold, 1928. Pp. 66.—This book, which is perhaps the last work of Bekhterev, gives in a concise form a survey of the concepts and problems of the reflexological method of investigation. Bekhterev tries in a general way to exclude all subjectivism from questions of collective actions and reactions. His reflexology as an objective science likewise excludes all subjective aspects from the individual personality. He tries to prove in this way that we really have in the expression of social life the same reflexes in the form of social movements and with the same development and action which we find in the activity of the individual personality. This seems reasonable when we take into consideration the fact that the collective realm is nothing more than a conglomeration of individual personalities united through mutual interests to make up a whole in the form of a collective or composite personality.—*P. Plaut* (Berlin).

3. **Bentley, M. Environment and context.** *Amer. J. Psychol.*, 1927, 39, 54–61.—The concept of environment has definite limits of usefulness and propriety in the biological and psychological sciences. The designation of an environment often confuses outside conditions which are effective for the organism with mere neighboring objects and events. Much of the surroundings of the living organism is not really environmental. The separation of the organism and environment at boundary lines is, in certain cases, arbitrary and conventional. Environment, as we commonly use the term, is only a particular case of a far more inclusive juxtaposition. Whenever the living substance or process is considered in its natural setting, it is necessary to deal with context. In psychology the context may be either internal or external. To consider only the external context, as in dealing only with the operations of stimulus and response, is to deal inadequately and superficially with the complexities and intricacies of the living and experiencing organism. —*G. J. Rich* (Bellevue Hospital).

4. **Beth, L. [Ed.] Zeitschrift fur Religionspsychologie.** Gütersloh: Verlag von Bertelsmann.—The Vienna specialist in psychology of religion is publishing a quarterly which will serve research and practice. The first *Heft* includes an inaugural discourse by Beth on the cure of souls, also researches concerning the feeling of inferiority in comparison with religion, observations on institutions, religiosity of youth, and others.—*A. Römer* (Leipzig).

5. **Blondel, Ch. La psychologie selon Comte, Durkheim, et Tarde. I. Le point de vue d'Auguste Comte.** (Psychology according to Comte, Durkheim, and Tarde. Auguste Comte's point of view.) *J. de psychol.*, 1927, 24, 382–399.—Blondel sees in the animal physiology of Comte the precursor of our psycho-physics and physiological psychology. Moreover, while he did not make a place for psychology in his hierarchy of sciences, Comte was compelled, because of the inadequacy of mathematics, astronomy, physics, chemistry, biology, and sociology, to add a seventh and final science, that of anthropology or ethics. The field of this science was largely human psychology as we know it today. Thus, when one studies the *Cours de Philosophie Positive* and especially the *Politique Positive,* he finds that, while denying the scientific value of introspection and, with it, a science of the mind, Comte did not neglect the subject matter which now comprises our physiological psychology, sociology and collective psychology, and individual psychology.—*N. L. Munn* (Clark).

6. **Blondel, Ch. La psychologie selon Comte, Durkheim et Tarde. II. Le point de vue de Durkheim.** (Psychology according to Comte, Durkheim, and Tarde. II. Durkheim's point of view.) *J. de psychol.*, 1927, 24, 493–519.—For Durkheim every social phenomenon is at the same time a mental phenomenon based upon collective feeling, thought, and action. Social phenomena are made possible by a collective representation of the mental states of individuals culminating in a group mind which is nevertheless not limited to the ideas of individuals. While social facts are mental, they are not exactly comparable to the familiar mental states and cannot

be studied by means of introspection. "It is to objective ideas, to the social environment and its morphology, not to the subjectivity of individual consciousness, that we must appeal in order to disclose actual causes and effective determinism." Like Comte, Durkheim held that sociology constitutes a necessary step between physiological psychology and individual psychology. "Social psychology is subordinated to sociology and commanded by it. The first can come only after the second."—*N. L. Munn* (Clark).

7. **Blondel, Ch. La psychologie selon Comte, Durkheim et Tarde. III. Le point de vue de Tarde.** (Psychology according to Comte, Durkheim, and Tarde. III. Tarde's point of view.) *J. de psychol.*, 1927, **24**, 591–609.—For Tarde, unlike Durkheim, society is a mere abstraction made necessary by our short-sightedness. The individuals which compose society alone have a concrete existence, and therefore sociology must be subordinated to psychology. There is an individual psychology and a collective psychology, both obtaining their best results from introspection. "Introspection, when it is applied to inter-psychological phenomena, that is to say social phenomena, is a method of observation at the same time, both subjective and objective. It is here the only method which surely attains its object. In the social body that object is always, in the last analysis, something mental which passes through the consciousness or sub-consciousness of our kind. And where can we better study this object than in its mirror which is in us?" Thus Tarde ties the social to the psychological. For Tarde the genetic order is evident. "There are at first individuals and individual manifestations, then groups and collective manifestations; society and social phenomena arise from the contact of individuals. Correlatively, it is the individual who explains the social. . . ." The influence of the group upon individuals and the rôle of imitation are also stressed. There is "a complex intercrossing of individual and social."—*N. L. Munn* (Clark).

8. **Boring, E. G. The problem of originality in science.** *Amer. J. Psychol.*, 1927, **39**, 70–90.—Scientific thought is the thought of scientists, where one man takes both from others and from his own past, selects, and perhaps by novel combinations creates. Almost never does an idea seem entirely new. Previous occurrences can usually be found if searched for. Originality in science is a matter of selection, of collocating, of emphasizing relationships, and of clarifying exposition. It depends upon scientific preparation. There is a progressive unity in scientific thought even if the rate of progress is very uneven. Originality may pass unnoticed unless it yields certain results. Discoveries are important when they are significant. Great discoveries do not occur until the times are ready for them; or, when they occur too early, they are not great. Much of the greatness that is attributed to the "great" is an artifact and depends upon factors that are not intrinsic to the mind of the "great" man. The argument is illustrated by examples from the history of physiological psychology.—*G. J. Rich* (Bellevue Hospital).

9. **Braun, H. Die Macht des Seelischen. Eine organische Psychologie als Lebensorientierung des Einzelnen und der Gesamtheit.** (The power of the mental. An organic psychology; being a life-orientation of the individual and of the community.) München & Leipzig: R. Oldenbourg, 1927. Pp. 188. M. 4.20.—Braun recommends at the start that we exclude the question as to what the mental is, because we cannot go beyond the ideas adapted to the capacity of our consciousness. Thus the natural sciences have achieved success precisely by their abandonment of the question as to the What. The immaterial force in us, Braun names mind; its action, the will. The will is the small force which we set against the great world of events. The organic structure of that great world is of a sort which is not entirely different from the structure of our own inner life. The psychic processes arise immediately from the encounter of the vital lines of our environment with the dispositions of our will. The processes become known to us in the phenomenal forms of thinking and feeling. The relative arises from the union of world and will; but beyond all that is relative stands the eternal as the original source. The book continues with disquisitions upon the crisis in civilization, the mental process in its progressive course, etc.—*A. Römer* (Leipzig).

10. **Carmichael, L., & Schlosberg, H. A device for the demonstration of certain illusions of motion.** *Amer. J. Psychol.*, 1928, **40**, 128–129.—A mechanism is described for the production under controlled conditions of the rinsing motion, in which the stimulus-object is revolved about a center but does not rotate on its own axis.—*G. J. Rich* (Bellevue Hospital).

11. **Crawford, D. M. Electrical apparatus for the accurate generation and measurement of noise and tone.** *Science*, 1928, **68**, 209–211.—An apparatus for making tests on noise is described. It gives a constant pitch of tuning fork accuracy, has a complete range of intensity variation, is simple to operate, can be built in portable units, and automatically compensates for variations in intensity due to being placed in a sound-reverberant or sound-absorbent room.—*G. J. Rich* (Bellevue Hospital).

12. **Dallenbach, K. M. Bibliography of the writings of Edward Bradford Titchener: 1917–1927.** *Amer. J. Psychol.*, 1928, **40**, 121–125.—The bibliography, begun by Foster, is brought up to date. Three books, 52 articles, notes and discussions, 2 editorial tasks, and 65 studies by students are cited. —*G. J. Rich* (Bellevue Hospital).

13. **de Eds, F., Rosenthal, S., & Voegtlin, C. The simultaneous automatic recording of electrical potential and muscular contraction.** *Amer. J. Physiol.*, 1928, **86**, 206–214.—Detailed description, with diagrams, of an electrical apparatus by means of which voltage changes in contracting muscle are measured. Also demonstration of a method by which muscular contraction and changes in electrical

potential in the muscle may be automatically and simultaneously recorded.—*M. J. Zigler* (Wellesley).

14. **Ellis, R. S. The psychology of individual differences.** New York: Appleton, 1928. Pp. vii + 533. $3.50.—This text "aims to give, especially for the benefit of the elementary student, an introduction to the problems, the methods, the results and the applications of the psychology of individual differences." The introductory chapter indicates the relationship of differential psychology to general psychology and general science; it likewise briefly outlines the salient problems of individual psychology. The second chapter is almost entirely anatomical and physiological, while the third presents an "analysis of the individual" in terms of physical, native, and acquired psycho-motor traits. A fourth chapter gives some essentials of mental measurement and a brief introduction to the simpler statistical measures. The next applies these devices to a description of the nature and extent of individual differences. Two chapters discuss the mechanism of heredity and variation and that of mental inheritance; one is devoted to the effect of environment. Sections are devoted to the following: age, sex, and race differences in mental traits, extreme deviations in mental traits, and the rôle of individual differences in social differentiation. A chapter dealing with the "organization of mind" presents the status of our knowledge concerning correlation of traits. In conclusion the facts of individual difference are applied to education, business, law and government, and to certain social problems. Each chapter is supplemented by a list of suggested reading and other references.—*F. A. Geldard* (Virginia).

15. **English, H. B. A student's dictionary of psychological terms.** Yellow Springs, Ohio: Antioch Press, 1928. Pp. 77.—This "defining" rather than "encyclopedic" dictionary was compiled for the student and the layman interested in psychology. The terms included are those which seem likely to trouble the general reader and the college student, those which are capable of treatment with reasonable brevity, and a few likely to increase the book's usefulness for reference, including some from related fields. Between 1500 and 2000 terms are defined.—*L. M. Harden* (Clark).

16. **Gates, A. I. Elementary psychology.** New York: Macmillan, 1928. Pp. xvii + 612.—This revision contains fewer applications to school problems and more applications to situations in business, medicine, law, art, athletics, and everyday life than did the first edition. The discussion of the cerebrum and its functions and the exercises following each chapter have been thoroughly revised. New material has been added to the topics of attention, imagery, personality, individuality, efficiency and volition. In several instances the sequence of the material in the book has been rearranged. A comprehensive and up-to-date bibliography follows each chapter. The book has been increased 21 pages in size.—*P. H. Ewert* (Vermont).

17. **Giese, F. Psychologisches Wörterbuch.** (A psychological dictionary.) Leipzig: Teubner, 1928. —*W. S. Hunter* (Clark).

18. **Halberstadt, G. Marcel Briand, l'homme et l'oeuvre.** (Marcel Briand; the man and his work.) *Ann. méd.-psychol.*, 1927, **4**, 297–321.—In this article, the author gives a resumé of the contributions of Marcel Briand to the general field of psychiatry, evaluating the services of the man to his profession and to his country. Briand was always interested in the various intoxications, which include such states as alcoholism, morphinomania, and cocainomania. All the forms of intoxications were equally familiar to him, not only the deliriums, the dipsomaniacal impulsions and the epilepsies, but also the modifications of the character and of the psyche. In the realm of lethargic encephalitis he did some important work, demonstrating the rôle played by this disease in the production of mental disturbances and in modifications of character having a medico-legal importance. Not only the psychoses of the young, but also the surgical treatment of the alienist held a fascination for Briand. However, he devoted less time to the organic nervous diseases than to the functional disorders. Military medicine and legal medicine have not failed to elicit the attention of this psychiatrist, who has shown great proficiency in the treatment of criminals and of war cases. A seven-page bibliography.—*P. A. Pooler* (Boston, Mass.).

19. **Halverson, H. M. The Yale psycho-clinic photographic observatory.** *Amer. J. Psychol.*, 1928, **40**, 126–128.—A revolving dome is described which carries cameras and light for adequate photographic illumination. By its use it is possible to photograph the behavior of a child from any desired angle.—*G. J. Rich* (Bellevue Hospital).

20. **Halverson, H. M. Timing the Filmo camera.** *Amer. J. Psychol.*, 1928, **40**, 129–130.—*G. J. Rich* (Bellevue Hospital).

21. **Heugel, W. Der Sortierkasten.** (A sorting box.) *Indus. Psychotechn.*, 1927, **4**, 124–125.—A brief description is given of a standardized test apparatus for sorting metal pieces into a box. Tentative norms are supplied.—*A. W. Kornhauser* (Chicago).

22. **Heymans, G. Gesammelte kleinere Schriften zur Philosophie und Psychologie.** (Collected minor essays on philosophy and psychology.) Haag: M. Nijhoffs Boekhandel, 1927.—*W. S. Hunter* (Clark).

23. **Hollander, B. In commemoration of Francis Joseph Gall (1758–1828).** *Ethol. J.*, 1928, **13**, 51–64.—The picture given of Gall differs somewhat from the one which has been held up to those of us who have had our psychological training in the twentieth century. "Gall was the first to describe the successive development of the brain and nervous system from the lowest animal to man, and the simplicity of the convolutions in the newly born and in the feebleminded. . . . He was the first to unfold the convolutions and to demonstrate the fibrous structure of the white matter of the brain; and he is the discoverer of the true origin of several of the cranial nerves; the olfactory, optic, oculomotorius, trigeminal and abducens nerves." "It is now admitted that Gall—not Broca, sixty years later—was the first to locate the centre for articulate speech and

verbal memory." "Gall's localisations have been misunderstood and are still misunderstood because of his peculiar terminology and no critic has ever taken the trouble to read his work to ascertain his meaning. What his critics also neglect to state is that Gall tried to confirm his localisations, whenever possible, by post-mortem investigations. Contrary to common belief, he originated no system, but simply recorded his observations." "Gall did not personify the faculties. . . . In fact he strenuously opposed the 'faculty' psychology which was so popular in his day." "Three great philosophers were inspired by Gall's doctrines," August Comte, Herbert Spencer, and William MacDougall. "He was the first to point out that moral defects are frequently caused by affections of the brain and gave an enlightened account of moral responsibility." Numerous citations and references are given. Few of them, however, come from twentieth century literature.—*F. M. Teagarden* (Pittsburgh).

24. **Hughes, P. An introduction to psychology.** Bethlehem: Lehigh University Supply Bureau, 1928. Pp. 214.—Psychology inquires into the attentive acts that mark the life-movement and life-career of persons. Its data are biotic—facts of biography. Its purpose is the understanding of the integral life-movement as a whole, and the betterment of life-careers. This is not merely or primarily a physiological matter, but one of personal agency and causation in acts of attention, choice and learning. Behavior exhibits an integral response to a total situation which cannot be analyzed into a number of reflex arcs. Psychical life is this integral activity of the body itself. The central field of psychological inquiry, studied in Part I, deals with two problems: the portrayal of the normal, unhampered life of a human being, fulfilling human possibilities; and the exploration of the differences between individuals and their causes. Part II proceeds to distinguish genetically within the individual the several processes of perceptual adaptation, of recognition, of recollection and reflective adjustment, and of creative imagination, which by self-discipline contribute to the best in human life. This leads to a study in Part III of the conditions within and without the body that favor or hinder this process of education. The result is behavior psychology. Processes under certain conditions produce certain patterns, such as habits of behavior, insights into the nature of things, patterns of memory and of character. Part IV studies and endeavors to understand these and their meanings. In Part V are considered the distribution of these human traits and patterns and the correlation between them, the capacities and attainments of men, and the methods of appraisal which discover them and determine their relative efficacy and value.—*E. B. Delabarre* (Brown).

25. **Jastrow, J. Concepts and "isms" in psychology.** *Amer. J. Psychol.*, 1927, **39**, 1-6.—The history of science has the broadening value for every scientist of an acquaintance with the intellectual steps by which his subject came to its present status and recognition. In the evolution of psychology, certain patterns or systems of thought have arisen which have frequently taken the name of "isms." Often they have been the body of doctrine of a single thinker. The whole method of "isms" is wrongly focused, in that they attempt to solve every problem by a single attitude or idea. But the central concepts have, in fact, been developed only for the solution of particular problems. So long as the concept is limited in its application to these problems it aids in the advance of science. When a universal application is attempted an "ism" develops, which has a tendency to become a cult rather than a science. Psychology needs especially to drop the outgrown and barren interest in "isms" and to substitute the living and profitable interest in concepts.—*G. J. Rich* (Bellevue Hospital).

26. **Jastrow, J. Keeping mentally fit.** New York: Greenberg, 1928. $3.50.—*W. S. Hunter* (Clark).

27. **Kahlson, G. Eine neue Methode der Elektrokardiographie.** (A new method of electrocardiography.) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 132-154.—A method of electrocardiography is described with which it is possible to register the action current of the heart without influencing the actual current. It is claimed for this method that, by means of the coupling used, transference of the variations in potential is accomplished without distortion, at the frequencies present, and free from errors of time or inertia, and further that the current registered is closely proportional to the actual action potentials.—*L. T. Spencer* (Yale).

28. **Keyser, L. S. The plus sign in modern psychology.** *Amer. J. Psychol.*, 1928, **40**, 156-162.—The papers and discussions at the Wittenberg symposium indicated a monistic and materialistic system of philosophy, with no conception of the mind as an entity or of the relation of mind and body. This point of view is counter to our everyday experience and is inadequate as an hypothesis upon which to base scientific thought. The hypothesis of dualism and interaction is proposed as being more satisfactory.—*G. J. Rich* (Bellevue Hospital).

29. **Landis, C. A note on apparatus for securing inspiration-expiration ratios.** *Amer. J. Psychol.*, 1928, **40**, 130.—The devices of Nixon and of Burtt are difficult to keep in proper adjustment.—*G. J. Rich* (Bellevue Hospital).

30. **Lauer, A. R. A new type of electrode for the galvanic skin reflex.** *J. Exper. Psychol.*, 1928, **11**, 248-251.—Description of an electrode which has the advantages of nearly perfect contact and constancy of pressure, a glass funnel into which a platinum or chromium wire is fused and in which any liquid or paste contact-medium may be used.—*F. A. Pattie* (Harvard).

31. **Lenoir, R. La "philosophie nouvelle" de Beyle.** (The "new philosophy" of Beyle.) *J. de psychol.*, 1928, **25**, 577-595.—A discussion of the philosophical aspects of Beyle's writings, with special reference to his social philosophy. He held that a science of folkways, due to the instability of societies, was impossible. His philosophy is shown to be

especially influenced by the French Revolution.—*N. L. Munn* (Clark).

32. **Messer, A. Einführung in die Psychologie und die psychologischen Richtungen der Gegenwart.** (Introduction to psychology and present psychological trends.) Leipzig: F. Meiner, 1927.—*W. S. Hunter* (Clark).

33. **Metzger, W. Certain implications of the concept of Gestalt.** *Amer. J. Psychol.*, 1928, **40**, 162–166.—An inadequate use of the concept of *Gestalt* led, in the experiments of Mogensen and English on the apparent warmth of colors, to false expectations of the outcome, while an adequate use of the concept would have promoted a contrary expectation.—*G. J. Rich* (Bellevue Hospital).

34. **Mull, H. K. A bibliography of the writings of Margaret Floy Washburn: 1894–1927.** *Amer. J. Psychol.*, 1927, **39**, 428–437.—Seven books, 7 editorial tasks, 107 articles and 64 reviews and notices are listed.—*G. J. Rich* (Bellevue Hospital).

35. **Needham, J. Man a machine.** New York: Norton, 1928. Pp. 103. $1.00.—First the controversy, as to whether man is or is not a machine, between la Mettrie and his unknown antagonist in 1750 is reviewed. The present dispute shows that the position of Rignano, that man is not a machine, has gained little beyond the previous argument, while the mechanistic position is greatly strengthened. Rignano emphasizes the final cause and holds that teleology is the unique characteristic of living matter. The view that man is not a machine is objected to by Needham because (1) there is not so much teleology in the living organism, (2) what there is is not unique or characteristic of life, and (3) if it were, it would have no scientific significance. The argument of purposiveness may be reversed, as demonstrated by Henderson, and then we should consider how the environment is adapted to the living organism. The last stronghold of the teleologist, that of memory and mental life, has been scratched by the biologist and is being opened by the experimental psychologist, the only scientific psychologist. Individual teleologies of the organic and inorganic world all merge into a universal teleology that passes beyond the pale of empirical investigation. The author concludes with a program showing that scientific knowledge is a result of the rules of the game; but that the result is orderly and does have heuristic value. This volume abounds in quotations and specific examples, all of which are documented by reference to the original sources.—*O. W. Richards* (Clark).

36. **Ogden, C. K. Forensic orthology; back to Bentham.** *Psyche*, 1928, **32**, 3–18.—Various estimates are placed upon the significance of Bentham in the history of thought. The writer believes that could he return in 1932 (the centenary of his death) he would find himself still alive. His activities included, besides inquiries into the theory of language and linguistic fictions, codification of legal systems, interest in international law, health and humanitarianism, and activity in the field of the psychology of value, which has proven itself to be in conformity with the most recent criticism. Orthology, the science of correct symbolism, served as the cornerstone of Bentham's system. A failure to recognize this on the part of subsequent writers is due to the fact that he was a hundred years ahead of his time. But when we review his theory of fictions (both legal and linguistic) in the light of modern psychology the true significance of his symbolic researches become clear. Psychology is interested to know what light recent advances in the science throw upon Bentham's actual position. To quote the writer: "Enlightened statisticians are now persuaded that Bentham's 'calculus' was merely a classificatory convenience." But he finds mathematical suggestions irrelevant. In fact it seems clear that his analysis of motive if interpreted in the light of modern critical theory is suggestive and profound. He regarded benevolence as the pre-eminent motive. He sought to place morality on a psychological basis, likewise law and its application.—*T. R. Garth* (Denver).

37. **Reymert, M. L. The new psychological laboratory of Wittenberg College.** *Amer. J. Psychol.*, 1928, **40**, 171.—*G. J. Rich* (Bellevue Hospital).

38. **Roback, A. A. Popular psychology.** Cambridge: Sci-Art, 1928. Pp. xii + 267.—The earlier work *Psychology with Chapters on Character Analysis and Mental Measurements* is extensively revised and amplified, with a view to its use for university extension work. An attempt is made to give a general survey of the entire field of psychology. Included are such varied subjects as: historical background; terms, e.g., sensation, emotion; practical applications; lists of problems for discussion; comparison of different schools; experimental technique; biographical notes of leading psychologists here and abroad; lists of psychological organizations and publications; bibliographies for beginners; character analysis; mental measurements.—*M. P. Montgomery* (Faribault, Minn.

39. **Ruckmick, C. A. Empirical psychology.** *Amer. J. Psychol.*, 1928, **40**, 166–168.—It is proposed to use the term "empirical psychology" to mean any form of psychology which collects its data from experience and which draws its conclusions only after these data have been collected and examined for points of similarity and difference in their own, not in their conceptual nature.—*G. J. Rich* (Bellevue Hospital).

40. **Schmalenbach, H. Die Entstehung des Seelenbegriffe.** (The origin of the concept of the soul.) *Logos*, 1927, **3**, 311–355.—Current studies concerning the relation between "explaining" and "understanding" psychology, etc., would receive most fruitful assistance from insight into the meaning, and in connection therewith, the origin of the ethical concept of the soul (see Socrates).—*A. Römer* (Leipzig).

41. **Schorn, M. Kongress für Psychologie in Bonn.** (The psychological congress in Bonn.) *Indus. Psychotechn.*, 1927, **4**, 159–160; 181–185.—Report of the papers delivered at the congress held in April, 1927. The papers more fully reported are: Charlotte Bühler's discussion of social psychology, Maria

Schorn's report of experiments on the effects of performing two tasks simultaneously, H. Henning's report of work on character tests, T. Valentiner's report on the work-performance of children, W. Blumenfield's discussion of the theory of practice effects, H. Lämmermann's report concerning the selection of superior students, W. Moede's analysis of fatigue measurement, and Maria Zilling's report on the effect of set or attitude on testimony.—*A. W. Kornhauser* (Chicago).

42. **Steinhausen, W. Ein neues Photographion.** (A new photographic recorder.) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 176–179.—A photographic recorder is described which is suited to both rapid and prolonged registration, thus combining in one outfit functions usually requiring two separate apparatus.—*L. T. Spencer* (Yale).

43. **Tennant, F. R. Philosophical theology, Vol. I. The soul and its faculties.** Cambridge: Univ. Press, 1928. Pp. xvi + 422. $6.50.—Scientific investigation of the self, whether as knower or as object known, must set out from the observable facts concerning mentality, as these facts are analyzed and systematized by psychology. The metaphysic of mind can only follow upon the empirical science of minds. The basal fact of philosophy is the existence of "knowledge" of "actuality" by "persons." *A priori* knowledge is impossible. To discover what knowledge of actuality is, and the validity of this knowledge, involves recourse to analytic and genetic psychology. The primary datum of psychology is self-consciousness. Consciousness involves a subject, and the modes or activities of that subject. These activities consist of feeling, conation, and attention. The reception of sense-impression is the ultimate analytical datum of objective experience; it is the source of perception and thought. Sensory data (sensa) are either due to stimuli or are subjective in origin. They are simple percepts. Their after-effects, through retention, are the source of memory and mental dispositions. After elaborating these functions, the author proceeds to defend the doctrine of pure ego or substantial soul against presentationism. Personality is determined by three factors: the soul, inherited endowments, and the physical and social environment. The latter portion of the book is concerned with metaphysical and religious problems.—*H. C. Warren* (Princeton).

44. **van Biervliet, J. Psychologie et psychologues.** (Psychology and psychologists.) *J. de psychol.*, 1927, **24**, 669–700; 798–826.—The peculiar object of psychology is "conscious life wherever it is manifested. It is necessary logically to consider as psychologists all those who in any way seek to determine, describe and explain conscious modifications, whatever the nature of these may be." Psychologists differ with respect to their general ideas, their attitude toward introspection, and their attitude toward scientific observation and experimentation. The author selects three psychologists, Fechner, Wundt, and Binet, to illustrate that psychology presents various points of view which depend upon the previous training and mental disposition of the psychologist. The scientific and metaphysical aspects of psychology are discussed and the author concludes that "To the extent that psychological phenomena are better understood, that their laws appear more precise, the metaphysics of psychology will be clarified." Introspection is "observation by the eye of consciousness of interior events, of modifications which are simultaneously and successively produced in what each of us calls 'I'." There are three species of self-observation; common observation of the self, the same type of observation applied by philosophers, and scientific introspection which involves an instruction of the subject, direction, and, as far as possible, careful control of conditions. The various factors which tend to vitiate introspection are elaborated. Introspection should be supplemented by "inquiry, the use of tests, scientific observation and experimentation." Various questionnaire methods and their validity are discussed in some detail. Tests, scientific observation, and the experimental method are considered. There is also a discussion of the qualities of the subject, the number of experiments, and the attitude of the experimenter necessary for good psychological experimentation.—*N. L. Munn* (Clark).

45. **[Various.] Washburn commemorative volume.** *Amer. J. Psychol.*, 1927, **39**.—Included articles will be found under their appropriate headings. The complete list is: III: 1, 3, 8, 25, 34, 48, 51, 56, 68, 71, 76, 81, 82, 85, 87, 89, 91, 97, 100, 101, 102, 103, 105, 107, 127, 155, 195, 211, 236, 243.—*G. J. Rich* (Bellevue Hospital).

46. **Vinchon, J., & Vié, J. Un maître de la neuropsychiatrie au XVIIe siècle: Thomas Willis (1662–1675).** (A master of neuropsychiatry in the seventeenth century: Thomas Willis (1662–1675).) *Ann. méd.-psychol.*, 1928, **86**, 107–109.—A summary of seventeenth century psychology and psychiatry and the contributions of Willis to the existing knowledge. The birth date should probably be 1621.—*O. W. Richards* (Clark).

47. **von Witzleben, H. D. Zur Psychologie der mittelalterlichen Weltanschauung.** (The psychology of the medieval conception of life.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1928, **112**, 807–811.—The philosophical orientation in psychiatry, after the example of Jaspers, is directed to the psychology of the *Weltanschauung*. The manner in which an objectively formed world originates from a subjective experience is studied, and the attention is turned toward ideal types. Medieval philosophy is a peculiar attitude toward God and life; the transcendental tendency is connected with the innermost being. The author calls the poles of medieval philosophy *synton* and *dyston*. *Synton* is the tendency toward completeness and equilibrium, *dyston* toward acuteness, distraction, pessimism, severity. Works of art are introduced as examples of both tendencies. The predominant spiritual phenomena are Augustine, scholasticism, and mysticism, expressions of spiritual volitional patterns. The Protestant individual mysticism, associated in a manner with the doctrines of the church, which required no intermediary between God and man, is significant. That the "pure ego" is always experienced abstractly and conse-

quently exists externally is a parallel with schizophrenia. The present time with its *complexio oppositorum* bears a peculiar stamp of its own.—*S. Krauss* (Heidelberg).

48. **Warren, H. C. Outline of a psychological standpoint.** *Amer. J. Psychol.*, 1927, **39**, 23–41.—This paper discusses the salient features of a psychological standpoint which seems to accord with known facts and to involve the fewest assumptions. The field of psychology is defined so as to embrace both behavior and introspective investigations, including all phenomena involved in the transfer of selected energy patterns from environment to organism and from organism to environment. The exact relation between data obtained by introspection and by behavior study is not yet clear. The assumption is made that "mental" and "neural" phenomena are two different manifestations of a single series of actual events. Consciousness is regarded as neural receptivity. The processes claimed by teleologists to demonstrate the efficacy of consciousness are reducible to mechanistic terms except for one doubtful instance. Parallelism is objectionable in that it fails to account for the synchronism of two distinct systems of events. Radical behaviorism ignores scientific investigation and assumes that the character of the response is determined by the motor discharge of neural energy, rather than by integrative central activity. Both introspection and behavior study are subordinate to the neurological method.—*G. J. Rich* (Bellevue Hospital).

49. **Wiggam, A. E. Exploring your mind.** Indianapolis: Bobbs-Merrill, 1928. Pp. 384.—A series of interviews with psychologists, in which each of them discusses some phase of his work which is of popular interest. The aim is to acquaint the general public with some of the achievements of modern psychology, particularly in the field of measurements. Following is a list of those interviewed, with their subjects: Edward L. Thorndike: *Your Mind. What It Is. How It Works.* Donald A. Laird: *How To Make An Inventory of Your Personality.* Henry F. Adams: *How We Judge Ourselves and Our Fellowmen.* David Mitchell: *What Are You Afraid Of?* Lewis M. Terman: *The Psychologist Looks At The Bright Child.* Catharine Cox Miles: *Have You a Future Genius In Your Home?* Carl E. Seashore: *How Musical Are You?* J. McKeen Cattell: *Psychology in Retrospect and Prospect.* Mark A. May and Hugo Hartshorne: *Science Measures Morals.* Michael I. Pupin: *Science Is Leading Us Closer To God.* Each interview is preceded by a short biographical sketch. Several of them contain tests with directions for their administration.—*M. P. Montgomery* (Faribault, Minnesota).

50. **Willoughby, R. R. The herediscope and artificial populations.** *Science*, 1928, **68**, 14.—Points out the potential usefulness of the Graves' herediscope, designed for demonstrating the mechanism of Mendelian heredity, in economizing labor on artificial-population problems.—*R. R. Willoughby* (Clark).

51. **Woodworth, R. S. Gestalt psychology and the concept of reaction stages.** *Amer. J. Psychol.*, 1927, **39**, 62–69.—The stimulus-response psychology holds that mental phenomena consists of series of responses to stimuli, a large portion of which are intraorganic. The sensationist, the perceptionist (*Gestalt* psychologist), the intentionist and the motorist each sees only a part of the entire process and therefore elaborates a one-sided and fanatical system. The concept of stages of reaction is probably the view of most psychologists, as well as of physiologists. The *Gestalt* conception seems to ignore many of the facts of the intraorganic phases and to be inadequate to deal with the effects of a plurality of stimuli. Succession and overlapping of stimuli are almost universal and the effects are best explained in terms of stimulus and response. It would seem that the presence of physical *Gestalten* in the environment is irrelevant to the perception of *Gestalt*, and that we are still free to believe in an unfigured sensory stage in the total response of the organism.—*G. J. Rich* (Bellevue Hospital).

[See also abstracts 73, 139, 162, 432.]

SENSATION AND PERCEPTION

52. **Beach, S. J. Total congenital color blindness.** *J. Amer. Med. Asso.*, 1928, **91**, 934–938.—Total color blindness is characterized by complete absence of color perception, light blindness, and impaired central vision, often accompanied by nystagmus. The luminosity curve shows the most brilliant part of the spectrum in the green, with shortening at the red end. The condition is similar to a permanent dark adaptation. It is best explained by the duplicity theory. Totally color blind subjects often do fairly well on the usual tests of color perception. With a Marten's photometer, however, the subject is able to make a perfect match with two different colors.—*G. J. Rich* (Bellevue Hospital).

53. **Benussi, V. Recherches expérimentales sur la perception de l'espace. II. Le phénomène de Panum.** (Experimental researches on spatial perception. II. Panum's phenomenon.) *J. de psychol.*, 1928, **25**, 465–506.—Using the haplo-diplokinescopic method, by means of which it is possible to determine the localization of two pairs of points of light, exposed on the tachistoscope with such exactitude that the two points of light present to the observer not only the successive perception of two pairs of points at rest, but that of two isolated points in movement along two trajectories of which the limits are indicated by the places in which the two points are localized, Benussi determined the rôle of eye movements in Panum's phenomenon. He comes to the conclusion that "Panum's phenomenon shows, in its purest form, the great importance of the mechanism of divergence and convergence, that is to say, of orientation of fixation, for spatial localization."—*N. L. Munn* (Clark).

54. **Bibring-Lehner, G. Über die Beeinflussung eidetischer Phänomene durch labyrinthäre Reizung.** (The influencing of eidetic phenomena by labyrinth stimulation.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1928, **112**, 496–505.—After Dittler had studied the influence of the after-image in the Bárány test,

work was devoted to the eidetic images in the combined Bárány-Jaensch test. In a particular series of experiments the eidetic images were elicited first in the nystactic phase after the turning. The results secured previously for the after-image demonstrate displacement and reproduction here also, as well as postponement of the turning movement of the image. Moreover there is shown, in addition to repeated changes in space color, a free development of the subject matter which is brought into relationship in this work with Freudian mechanisms. Schilder found the same in hallucinations of seeing movement. Perceptions of movement conditioned by the labyrinth are characterized by particular ease in transposition, perhaps a hint of the primitive stratification of this experience.—*S. Krauss* (Heidelberg).

55. **Burridge, W. Note on after-images.** *Quar. J. Exper. Physiol.*, 1928, **18**, 323.—Excitability changes mediated by ions come and go instantaneously. Changes mediated by colloidal aggregations develop at variable speeds and subside at various speeds. This fact is important in the explanation of after-images.—*L. Carmichael* (Brown).

56. **Dallenbach, K. M. The temperature spots and end-organs.** *Amer. J. Psychol.*, 1927, **39**, 402–427.—A study of the methods used in locating temperature spots upon the skin showed that changes in the tissue relations, volumetric changes, instability of markings upon the skin, elasticity of the skin, difficulties of localization, variations in pressure, variations in duration of stimulation, effects of radiation, summation-effects, after-images, fatigue, and "tuning" entered as sources of error. An exact procedure is described which involves the use of a water-regulated thermo-esthesiometer in which the pressure exerted is constant, a constant marking on the skin protected by a felt ring, a plaster cast to steady the *O*'s arm, and a punctiform method of stimulation. With this procedure correspondences of over 90% were obtained between successive experiments. Extirpation and microscopical examination of warm and cold spots revealed numerous undifferentiated nerve endings, but not one specialized end-organ.—*G. J. Rich* (Bellevue Hospital).

57. **Dupont, G. Des images secondaires fournies par le système dioptrique de l'oeil et en particulier des images de Purkinje-Sanson.** (On the secondary images produced by the optical system of the eye, and in particular the Purkinje-Sanson images.) *Ann. d'ocul.*, 1927, **164**, 739–769.—Four Purkinje images, due to simple reflection from the optic surfaces, are to be distinguished, one from the anterior surface of the cornea, one from the posterior surface of the cornea, one from the anterior surface of the lens, and one from the posterior surface of the lens. A fifth image is discernible, differing from the above in that it is due to a double reflection from the optic surfaces, and is subjectively observable under appropriate conditions; it arises by reflection first from the posterior lenticular surface and then from the anterior corneal surface. Other images, theoretically possible, are too faint to be observed.—*E. G. Wever* (Princeton).

58. **Forbes, W. T. M. An interference theory of color vision.** *Amer. J. Psychol.*, 1928, **40**, 1–25.—The theory here proposed assumes that only one light-sensitive substance is concerned with photopic vision—a visual violent substance similar to the familiar visual purple of scotopic vision. Three kinds of cones are postulated: (1) white, with no special structures, in which the visual pigment is diffuse; (2) yellow, with a reflecting surface at its further end and an insulating film at a distance back from it where interference causes a maximum intensity for green, with the visual pigment present in equal amounts on both sides of the film; and (3) red, similar to the above in structure, but with the insulating film at the maximum level for yellow. Colored light has a level of maximum intensity caused by interference of the direct and reflected waves. If it lies on the same side of the film as the cell-body and nerve it causes increased activity of the nerve and yellow or red sensation. If beyond the film it causes inhibition and blue and green sensations, respectively. Visual pigment is restored at a relatively constant rate, but ceases under a very dim light as the cones become saturated. The total capacity of the white-cones is higher than that of the colored, so that very dim light produces no color-sensation.—*G. J. Rich* (Bellevue Hospital).

59. **Gemelli, A. Contribution á l'étude de la perception. Recherches expérimentales et vues générales.** (Contributions to the study of perception. Experimental researches and general views.) *J. de psychol.*, 1928, **25**, 97–129.—While the *Gestalt* psychologists, by their attack upon the atomistic concepts of the structuralists, have given new life to the study of perception, their denial of the possibility of analyzing perception into its constituents is untenable. The "functional analysis of perception" is possible. This analysis will necessitate an experimental variation of the phenomena giving rise to the perception. Perception itself is for Gemelli "the organization of 'elements' of sensorial origin into a 'whole' (intuitive organization) which is recognized as such, and to which we attribute a meaning." In line with this theory he posits six laws of perception: (1) *The law of least effort;* "the organization of data of sensory origin is brought about according to the line of least resistance"; (2) *the relative functional autonomy of perceptual elements;* (3) *the functional unification of all the elements of perception;* (4) *the definite character of perception;* "there is a cooperation of different sensations into a determined and precise form"; (5) *rectification of sensory data and constancy of the intuitive organism;* (6) *the finality of the intuitive organism and of the significance of the 'objects' of perception.* The author finds that these theoretical considerations are supported by experimental work in his laboratory. He reports that Gatti has shown that "optical illusions tied to the perception of angles depend upon the modality of the perception of representative complexes, and, more precisely, in such a manner as do the spatial relations which exist between the parts of a complex. The causes of the illusions in question will be intrinsic to the function of per-

ceiving, and, in a certain manner, independent of the physiological processes of vision." Zama showed that a modification of physiological conditions does not prevent a continuation of the illusion. He found that a stereoscopic presentation of the complex bringing forth an illusion did not cause this illusion to disappear. Zama, in an experiment upon the influence of visual presentation on the tactual perception of form, has shown that a reciprocal relationship results, the two elements resulting in "a whole; the intuitive organism." Galli, likewise, has shown the reciprocal influence upon perception of sensorial elements, his researches dealing with the perception of bodily movement. The author finds, furthermore, that the laws which he has enunciated apply especially well to his results on the influence of color upon form.—*N. L. Munn* (Clark).

60. **Gemelli, A. Sulla influenza reciproca della forma e del colore nella percezione degli oggetti.** (On the reciprocal influence of form and of color in the perception of objects.) *Riv. di psicol.*, 1928, 24, 7–13.—The major part of this article deals with the definition of perception. Perception is considered phenomenologically as an intuitive organization to which is added the intellectual element of meaning. The latter part of the article gives a brief summary of experimental work of the author on form and color reported elsewhere.—*T. M. Abel* (Illinois).

61. **Gradle, H. S. An unexplained visual phenomenon.** *Science*, 1928, **68**, 404.—The propeller of an aeroplane in motion, which is invisible in direct vision, can be seen upon turning the visual axes of the eyes laterally.—*G. J. Rich* (Bellevue Hospital).

62. **Guilford, J. P., & Dallenbach, K. M. A study of the auto-kinetic sensation.** *Amer. J. Psychol.*, 1928, **40**, 83–91.—A photographic record of eye-movements was made during the occurrence of the auto-kinetic sensation, the apparent wandering of a dim spot of light in a dark field. A detailed study of the records shows that no gross movements were made during the illusion. When the stimulus was exposed to only one eye, the illusory movements showed typical paths which were circular and along one of the diagonals of the visual field; when it was exposed to both eyes the pathways were less regular. An hypothesis that the illusion is due to the streaming phenomenon appears adequate to explain all the known facts about it.—*G. J. Rich* (Bellevue Hospital).

63. **Hartmann, E. Le problème de l'effacement de la tache aveugle dans le champ visuel.** (The problem of the obliteration of the blind spot in the visual field.) *Ann. d'ocul.*, 1927, **164**, 329–336.—Criticisms are made of Bard's theory, which states that the blind spot is filled in by projection to the region of neighboring points due to the fact that the retinal receptors for those points have their axes inclined in a peculiar manner. First, it is pointed out that on such a view of the projection of space, slight irregularities in the axes of the retinal elements would lead to great modifications of the geometry of vision, and, indeed, considerable irregularities exist in the fovea without disclosing any such modifications; and, second, there are pathological scotomata which are filled in quite effectively, but which are not accompanied by any changes in the axes of the retinal elements at their borders, as the theory would demand. The obliteration of the blind spot should be regarded as a particular instance of a general law which states that scotomata resulting from central lesions are normally not recognized; and the reason is no doubt psychological rather than anatomical.—*E. G. Wever* (Princeton).

64. **Hartmann, E. La localisation des images visuelles et la théorie de l'indice local de Bard.** (The localization of visual images and Bard's theory of local sign.) *Ann. d'ocul.*, 1927, **164**, 412–423.—Further criticisms of Bard's theory of projection, and a defense of the geometrical theory (see III: 63).—*E. G. Wever* (Princeton).

65. **Jacobs, M. The study of color.** London: Heinemann, 1927. Pp. 235. 15s.—*W. S. Hunter* (Clark).

66. **Jones, L. A. Color values under incandescent tungsten illumination.** *Academy of motion picture arts and sciences*, Report No. 1, 29–38.—The paper deals with the following subjects: (1) The quality or spectral composition of the radiation emitted by various light sources; (2) the characteristics of the human eye as a sense organ responding to stimulation by radiant energy of various wave-lengths; (3) the characteristics of objects which it is desired to photograph, particularly their capacity to reflect or transmit radiant energy of various wave-lengths; (4) the characteristics of photographic materials as light sensitive receptors responding to radiant energy of various wave-lengths. A number of figures are interspersed through the work.—*P. R. Farnsworth* (Stanford).

67. **Köhler, A., & Tobgy, A. F. Mikroskopische Untersuchungen einiger Augenmedian mit ultraviolettem und mit polarisiertem Licht.** (Microscopic investigations of certain refractive media of the eye with ultraviolet and with polarized light.) *Arch. f. Augenhk.*, 1928, **99**, 263–291.—A microphotographic study from the Carl Zeiss laboratory of the transmission and absorption of various wavelengths by the substances of the lens and the cornea. The range of difference in the transmission values for a given range of wave-lengths is reduced enormously in the microscopic sections as compared with full thickness of the lens. Very few numerical data are given and the report deals chiefly with the ultraviolet. Sixty-one photographs.—*S. M. Newhall* (Yale).

68. **Langfeld, H. S. Apparent visual movement with a stationary stimulus.** *Amer. J. Psychol.*, 1927, 39, 343–355.—Apparent movement was obtained by the successive stimulation of non-corresponding points of two retinas. The movement was, in the main, the same as that obtained by successive stimulation of neighboring points of the same retina. The nature of the movement varied with the interval between the stimulations. Fusion of double images into a single stationary image was obtained with rapid speed of shutter. Under certain conditions

"pure" movement was obtained. The perception appeared to be that of the movement of an unseen object. Movement was also obtained by the stimulation of only one eye by the object if the other eye was stimulated before or after by the background. While eye-movements may occur, they are not the fundamental cause of the apparent movement.—*G. J. Rich* (Bellevue Hospital).

69. **Lufkin, H. M. The best fitting frequency function for Urban's lifted-weight results.** *Amer. J. Psychol.*, 1928, **40**, 75–82.—The normal probability (phi-gamma hypothesis), Pearson and Gram-Charlier functions were fitted to Urban's original data for lifted weights. The accuracy of fit was measured by the sum of the squared differences between the theoretical and actual values divided by the theoretical values. According to this criterion there does not seem to be very much choice as to which curve gives the best fit, with a slight tendency to superiority on the part of the Gram-Charlier function.—*G. J. Rich* (Bellevue Hospital).

70. **Meyer-Steineg, N. Beitrag zu den "angeborenen Gesichtsfelddefekten."** (A study of the "congenital defects of the visual field.") *Arch. f. Augenhk.*, 1928, **99**, 501–511.—An analysis of seven cases of visual field anomaly all classified as in part pathological and acquired and in part congenital and stable. Enlargements of the blind spot, restrictions of the field, and various scotomata are described. Twelve charts of defective fields.—*S. M. Newhall* (Yale).

71. **Nafe, J. P. The psychology of felt experience.** *Amer. J. Psychol.*, 1927, **39**, 367–389.—The qualities of felt (cutaneous and kinesthetic) experiences, as generally recognized, are not simple and unanalyzable but are analyzable patterns. Titchener's "touch pyramid" is inadequate to the facts. Any attempt to show qualitative series cannot logically be accomplished. Felt experiences are, qualitatively regarded, patterns of brightness (or sharpness) of greater or less complexity. In structure such patterns resemble tones (timbre). The experiences vary in brightness, volume, density, definiteness of outline, and may vary in intensity, but such variation is not shown, in any case, to be independent of variation in other aspects. The experiences may be localized. Affective and emotional experiences are fundamentally similar to other ("sensory") felt experiences. The proper name for this modality, including cutaneous, kinesthetic, organic, affective and emotional experience, is the sense of "feeling."—*G. J. Rich* (Bellevue Hospital).

72. **Pratt, C. C. Comparison of tonal distances.** *J. Exper. Psychol.*, 1928, **11**, 77–87.—"Experiments on the bisection of supraliminal tonal intervals . . . have shown that the midpoint for intervals not larger than an octave coincides with the geometrical mean, but that in proportion as the intervals exceed the limits of an octave their midpoints tend to move up from the geometrical towards the arithmetical mean. Direct comparisons of the same interval at different pitches, as made in the present experiment, reveal similar phenomena. The interval begins to assume greater size when the pitch is increased by an octave. At an octave and a half its apparent size has increased nearly 100 cents . . ."—*F. A. Pattie* (Harvard).

73. **Reiser, O. L. The alchemy of light and color.** New York: Norton, 1928.—The author deals with the relation between the subjective and objective phases of sensory perception. The question is raised, "What is the alchemy whereby physical light, chemical color and nerve processes are changed into psychical light and color?" The cortex makes a contribution which consists mainly in incorporating the contributions from the senses into a higher synthesis. Nerve impulses are integrated into the unity of consciousness through some sort of harmonic synthesizer. Soul is the harmony of body. The relation between consciousness and the nervous system is that between the fields of energy and matter.—*J. Nagge* (Clark).

74. **Riesz, R. R. Differential intensity sensitivity of the ear for pure tones.** *Phys. Rev.*, 1928, **31**, 867–875.—Differential sensitivity was measured by determining, for a tone of given frequency and intensity, the minimal intensity to which a second tone differing from the first by 3 cycles per second had to be raised to make beats just perceptible. (Preliminary investigation showed this beat-frequency to give maximal sensitivity.) Determinations were made on 7 tones, ranging from 35 to 10,000 cycles per second, each being used at intensities ranging from threshold-value to the practical maximum. The Fechner ratio was found to be practically constant for any given frequency for intensities 10^6 times threshold-value; it ranges from 0.05 to 0.15, depending on the frequency. Near threshold intensity the ratio increases. Some data are given on the total number of tones distinguishable by this method.—*E. G. Wever* (Princeton).

75. **Roaf, H. E. The influence of coloured lights on the sensitivity of the eye to various regions of the spectrum: a study in relation to theories of colour vision.** *Quar. J. Exper. Physiol.*, 1927, **18**, 243–262.—The threshold value for light is used as a measure of sensitivity of the retina. Light shining on the retina decreases, even in another part than that illuminated, the sensitivity of the retina to short wave lengths. The sensitivity to long wave lengths is less affected by this procedure. A region 30° to the nasal side of the fovea of the right eye is more easily light-adapted than the fovea. Here the long wave lengths are more noticeably affected. These and other recorded facts do not fit the Young-Helmholtz or the Hering color vision hypotheses. A new theory of color vision is proposed which assumes that color discrimination is due to color screens in front of certain of the receptors. A theoretical basis is suggested to account for the fact that a blue screen is best to protect the eyes from such glare as that of bright headlights in night motoring.—*L. Carmichael* (Brown).

76. **Ruckmick, C. A. The rhythmical experience from the systematic point of view.** *Amer. J. Psychol.*, 1927, **39**, 356–366.—In primitive surround-

ings rhythm was largely motor in composition. But, as the process becomes more and more abstracted and rhythm is experienced as an idea rather than a perception, the kinesthetic factor drops out and motor expression is no longer a necessity. Many factors vary the gradual decadence of motor concomitants. Rhythm in whatever sensory field it occurs may be defined as the perception of a temporal form or pattern in which individual members repeated periodically are consistently varied in any one or more of their qualitative or quantitative attributes. In the pattern the individual members are usually not recognized as such. The perception of rhythm offers no exception systematically to the general classification of perception where form and not content is emphasized.—*C. J. Rich* (Bellevue Hospital).

77. **Schubert, G. Sind urfarbige Lichterpaare komplementär?** (Are pairs of primary colored lights complementary?) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 82–100.—Under neutral conditioning of the eye and with central fixation opposite and primary colors, in the Hering sense, are complimentary. The mixture was proven free from color by (1) the successive contrast method of Hering and (2) by equation with a colorless binary mixture itself verified by the Hering method. Colorless mixtures produced under conditions of neutral conditioning appeared bluish or yellow under daylight adaptation.—*L. T. Spencer* (Yale).

78. **Seidel, E. Methoden zur Bestimmung des intraokularen Druckes; Methoden zur Untersuchung des intraokularen Flüssigkeitswechsels.** (Methods for the determination of intraocular pressure; methods for the investigation of changes in intraocular viscosity.) *Handb. d. biol. Arbeitsmethoden*, ed. Abderhalden; Teil VI, Heft 7. Berlin, Wien: Urban & Schwarzenberg, 1927.—*W. S. Hunter* (Clark).

79. **Tscherning, M., & Larsen, H. Colour-vision and its anomalies.** *Acta. Ophth.*, 1927, **4**, 289–339.—The present paper is based on a rather unusually long series of measurements made by one of the authors and published in Danish as his thesis (H. Larsen: *Undersögelser over Farvesansen* (Investigations on the Color-Sense), Copenhagen, 1921). At the outset all the principal objections which might be advanced against Young's theory of color-vision are indicated. One part of the measurements aims to determine the distribution of brightness in the spectrum and tables and graphs illustrate the results. A mode of representing the distribution of the three colors in the spectrum consisted of noting the wave-lengths which were indicated by hundreds of μ, along the abscissa axis, and, on each ordinate, noting three points, whose distances from the abscissa axis indicate the quantities of red, green and violet contained in the radiation at hand. On drawing a line through all the points of red as well as through those of green and violet, respectively, one obtains three curves showing the distribution of the three pure colors in the spectrum. The apparatus, the principle of which was borrowed from Maxwell's color-box, is an installation occupying a whole room. It had originally been fitted up for the ophthalmological laboratory of the Sorbonne in Paris, but is now at the ophthalmological department of the Rigshospital at Copenhagen. A description with sketch of apparatus is given. One general result: it is the central organ which enables one to see the color in question and which determines the general intensity at which one sees the color. The terminal organ determines the relative intensity with which the different radiations act, and, consequently, the shape of the color curves and the limits of the visible spectrum. If the abnormal see the spectrum displaced or elongated, this is due to their terminal organs being different from those of normal persons. The general results of the entire investigation, according to the authors, seem in all particulars to verify Young's theory. Many of the special results are also interestingly and suggestively discussed. Foot-note references, tables, graphs, etc. Especially should be mentioned a colored plate of the spectra of normal, abnormal, protanopes, deuteranopes and monochromates.—*M. L. Reymert* (Wittenberg).

80. **Wever, E. G. Attention and clearness in the perception of figure and ground.** *Amer. J. Psychol.*, 1928, **40**, 51–74.—Attention plays a prominent rôle in the perception of figure and ground. The field that is figure is in general also the portion of the experience which stands forth as attentively clear, while the groundal field occupies a subordinate position in clearness. When the conditions are equivocal, the experiences are frequently of an intermediate order. With such intermediaries a close correlation is found to exist between the clearness-status and figure-properties of the several portions of the experience. If two fields share about equally the property of figure, they are found also to occupy in most cases the same level of clearness. A reversal of figure-ground fields may occur either during a presentation or in the after-image following a presentation, and is accompanied by an exchange in clearness-status. Thus has been established a high, though not a perfect, correlation between figure-ground status and degree of clearness in a perception. This clearness does not appear to be either what has been called sensory clearness or what has been termed cognitive clearness, for any such differentiation failed to be revealed, and does not seem to be limited by the dual-level hypothesis—*G. J. Rich* (Bellevue Hospital).

[See also abstracts 10, 33, 172, 214, 362, 422, 458.]

FEELING AND EMOTION

81. **Angier, R. P. The conflict theory of emotion.** *Amer. J. Psychol.*, 1927, **39**, 390–401.—John Dewey's theory of emotion has escaped general notice. The conflict theory holds that whenever a series of reactions required by an organism's total "set" run their course to the consummatory reaction which will bring "satisfaction," unimpeded by other reactions that cannot readily be integrated with them, there is no emotion. Emotion arises only when these

other reactions are so irrelevant as to resist ready integration with those already in orderly progress toward fruition. Such resistance means actual tension, inhibition or conflict. Such conflict constitutes the emotion. Without it there is no emotion; with it there is.—*G. J. Rich* (Bellevue Hospital).

82. **Cannon, W. B. The James-Lange theory of emotions: a critical examination and an alternative theory.** *Amer. J. Psychol.*, 1927, **39**, 106–124.—The James-Lange theory, that the backflow of impulses from the viscera accounts for the richness and variety of emotional feeling, is open to a number of criticisms. Total separation of the viscera from the central nervous system by surgical means does not alter emotional behavior. The same visceral changes occur in very different emotional states and in such non-emotional states as fever, exposure to cold, asphyxia and hypoglycemia. The viscera are relatively insensitive structures. Visceral changes are too slow to be a source of emotional feeling. Their reaction time is longer than that of emotional responses. Artificial stimulation by adrenin of the visceral changes typical of strong emotions does not produce them. Evidence from experiments by extirpation, from the effects of anesthetics and from pathological cases indicates that emotive responses are dependent upon a subcortical center, probably in the thalamus. Sensations from the positions and tensions of skeletal muscles are no more adequate to emotion than are the visceral reverberations. The theory propounded holds that the neural arrangements for emotive expression reside in the thalamic centers, and that these centers are ready for instant and vigorous discharge when they are released from cortical restraint and are properly stimulated. The quality of the emotion is added to simple sensation when the thalamic processes are roused, as the latter not only innervate muscles and viscera but also excite afferent paths to the cortex. This theory appears to fit all the known facts, more especially the presence of bodily changes in emotion, the short latent period, the emotional effects of assumed postures, the presence of feeling during the period of paralyzed inaction, the impulsive character of emotion, and the conditioning of emotional responses.—*G. J. Rich* (Bellevue Hospital).

83. **Cuylits, —. Sur l'affectivité.** (Concerning affectivity.) *J. de neur. et de psychiat.*, 1927, **5**, 294–299.—The physiological manifestations characteristic of states of depression indicate a disturbance of the vagotonic or of the hypotonic type. The rôle of the sympathetic nervous system has often been underestimated. The author concludes from the considerations presented in his paper that the condition of the sympathetic system determines body sensations and affects, influences intellectual processes and spontaneous activity, and is at the root of some psychotic conditions.—*H. C. Syz* (New York).

84. **Dumas, G. Le choc émotionnel. Réactions glandulaires et vasculaires.** (Emotional shock. Glandular and vascular reactions.) *J. de psychol.*, 1928, **25**, 130–164.—A theoretical discussion of the glandular, vascular, and muscular reactions to emotional situations of a powerful and sudden nature. The author's discussion is based largely upon the experimental work done by Cannon, Brunswick, Washburn, La Paz, Piéron, and others. 39 references to experiments appear in footnotes. "Slight shocks," he says, "are excitants and intense shocks inhibitors of all external secretions whatever they may be and that this applies to all emotion in so far as it is shock, that is to say, sudden and powerful . . . emotional shocks provoke non-specific polyglandular responses, and these responses are ordinarily positive or negative according to the intensity of the stimulus." Hypersensitivity due to drugs, and to various maladies associated with the glandular system, are discussed. An extensive table showing the antagonistic innervation of the sympathetic and parasympathetic system is included.—*N. L. Munn* (Clark).

85. **Fernberger, S. W. Six more Piderit faces.** *Amer. J. Psychol.*, 1927, **39**, 162–166.—The results for 6 new Piderit model faces depicting emotions confirm the earlier studies by Buzby and by Jarden and Fernberger. There is a wide scatter in judgment of facial expression when the *S* does not know what feeling a given face is supposed to express. Suggestion increases the percentage of correct recognitions.—*G. J. Rich* (Bellevue Hospital).

86. **Lindworsky, J. Orientierende Untersuchungen über höhere Gefühle.** (Orienting researches on higher feelings.) *Arch. f. d. ges. Psychol.*, 1928, **61**, 197–260.—"Higher feelings" are defined as feelings which are aroused by insight into a situation (*Sachverhalt*). It was the author's purpose to determine whether higher feelings have a special *quale* which distinguishes them from feelings which are not so aroused. To this end he made a general study of "complex feelings." By the latter term he means subjective feelings in contradistinction to the objective feelings which for immediate experience are properties of the stimulating objects (e.g., the pleasantness of a color is an objective feeling). In the experiment the four principal types of complex feeling were studied, namely, joy, anger, fear and sorrow. The subjects reported feelings only if certain bodily events or bodily postures were experienced; for brevity the author subsumes all these experiences under the name of "organic sensations." Frequently the feeling-state is sufficiently characterized by the organic sensations alone. Sometimes, however, the same organic sensations are experienced in different states of feeling. But if we take into account the situation which aroused the feeling, we find that this factor together with the organic sensations serves completely to specify the feeling; no new element is required. The protocols furnish no evidence for the existence of a special type of feeling which is generated only by insight into a situation and which is essentially different from the sensory feelings. But the results contradict the theory that the feeling-state is a summation of the affects accompanying the images (*Vorstellungen*) which are aroused. The organic sensations reported are of the type which occur when innate reaction-patterns enter into activity, and they point to certain "basic biological complexes" such as hunger,

fatigue, need of respiration, etc. Lindworsky arrives at the following working hypothesis: "In the complex feelings we experience—wholly or in part—those basic biological complexes which have features in common with the present situation and are in a sufficient state of preparedness at the time." He contrasts this notion with the narrowly associational theory advocated by the behaviorists. The final section of the article deals with the application of the working hypothesis to certain fundamental problems of the theory of feeling.—*D. McL. Purdy* (California).

87. **Stratton, G. M. Anger and fear: their probable relation to each other, to intellectual work, and to primogeniture.** *Amer. J. Psychol.*, 1927, **39**, 125–140.—The strengths of reaction to anger and to fear were measured by means of self-rating scales applied to actual occurrences of emotional situations and were compared with each other, with intelligence, with scholastic grades, and with position in the family. There is a definite positive correlation between the strengths of the two types of emotive response, which may be explained by the fact that they are both defense reactions. There is no connection between either emotion and scores on intelligence tests, but both show slight negative correlations with academic grades. The first-born in a family is more subject to anger than are the later children, and this does not depend upon his being an only child.—*G. J. Rich* (Bellevue Hospital).

[See also abstracts 104, 137, 362.]

ATTENTION, MEMORY AND THOUGHT

88. **Bousfield, W. R. The basis of memory.** New York: Norton, 1928. Pp. 102. $1.00.—The purpose of this book is to develop in a more concrete form the theory of psychical or mental structure as the basis of memory, and to show that it gives a good account of some mnemonic phenomena which do not receive a satisfactory explanation on the hypothesis of protoplasmic structure as the basis of memory. The author devotes special chapters to Mnema (the psychic structure which receives and retains memory traces), Association and Selection, Habit, and Forgetting, and finally concludes that the essential thing in memory is ideas, not words.—*Y. Silverman* (Clark).

89. **Calkins, M. W. The ambiguous concept: meaning.** *Amer. J. Psychol.*, 1927, **39**, 7–22.—The word "meaning" has been employed in seven main senses, some inconsistent with each other, and all clearly distinguishable. Four of these conceptions, those of meaning as unanalyzable awareness of objects, as intuition, as imaginal context and as relational consciousness, must be abandoned as being untrue to the facts. The conceptions of meaning as signification, as implication and as volition resist criticism. But no one of them is essential to psychology and distinctive of it. There is no reason why psychology should insistently claim the concept of meaning.—*G. J. Rich* (Bellevue Hospital).

90. **Cuff, N. B. The relation of overlearning to retention.** Nashville: George Peabody College for Teachers Cont. to Educ., No. 43, 1927. Pp. 33.—The author made an attempt to determine whether there is an approximate proportionality between the number of readings of a series and the saving of work in relearning; or to determine, so far as the data would permit, how far over-learning is necessary and at what point it becomes wasteful. 54 college students ranging in age from 16 to 28 years were used as subjects. Consonants, digits and nonsense syllables were used as materials, and these were administered by the use of Jastrow's memory apparatus and a metronome. The tests were given to groups of 9 subjects each, the same period being used each day of the testing. The test given on the previous day was relearned each day, and after a rest of five minutes a new test was taken up. Each subject took 11 tests, making a total of 594. From the twelve tables given in the monograph the following conclusions are drawn: (1) There is not an approximate proportionality between the number of readings of a series and the saving of work made possible thereby. (2) The percentages saved may decrease as the repetitions increase after a series is learned. (3) Girls show a superiority over boys in every respect in the experiment. (4) Subjects scoring high on one test often score low on another. The bright subjects profit from additional readings after a series is learned than do the duller ones.—*S. C. Garrison* (Peabody).

91. **Downey, J. E. Individual differences in reaction to the word-in-itself.** *Amer. J. Psychol.*, 1927, **39**, 323–342.—The introspections of a number of psychologically trained subjects concerning their spontaneous reactions to isolated words are summarized. The objective reactions to the word included comparison of the visual word-form with the sound, comments on word-form, and conflict between the meaning and the word-in-itself. The associative reactions were verbal supplementation, visual imagery, auditory imagery, dated memories, and literary or art associations. Among the intra-subjective reactions were found organic, olfactory, gustatory and cutaneous experiences, attitudes and activity tendencies, and affective and emotional experiences. Three types of symbolization occurred: word-coloration, visual patterning of auditory content, and time-of-day connotation. Personalization, the projection of psychic content into a word, was reported. The material presented makes possible a comparison of word-reactions with reactions to tones and to colors—*G. J. Rich* (Bellevue Hospital).

92. **Elkine, D. De l'influence du groupe sur les fonctions de la mémoire.** (The influence of the group on memory functions.) *J. de psychol.*, 1927, **24**, 827–830.—40 children, 19 boys and 21 girls, from 8 to 12 years of age were required to learn comparable lists of words and numbers, both in the group and individually. The author found better retention and less rapid forgetting for the lists learned in the group. He attributes this to (1) the spirit of emulation, (2) suggestibility or "psychic contagion" in the group, and (3) an augmenting, in the group, of

the child's psycho-nervous tonicity. He does not, because of the size of his group of subjects, attach anything but suggestive importance to his findings.—*N. L. Munn* (Clark).

93. **Friedländer, A. A. Ein Fall aussergewöhnlicher Gedächtnisleistung. (Ein kleiner Beitrag zur Eidetiklehre.)** (A case of extraordinary memory. A small contribution to the theory of eidetic imagery.) *Psychiat.-neur. Woch.*, 1928, 30, 1–202.—In the case which Friedländer (Freiburg) considers, we are dealing with a man who shows a many-sided natural endowment, despite a great weakness of will, pseudologia phantastica, etc., and whose memory was phenomenal. At a great festival representatives of the state and of the church made long speeches. X, who had attended this festival, was asked to make a speech. He did so and not only repeated the most important sentences of all the previous speeches verbatim but even imitated the gestures, intonation and expression of the speakers. The Sunday edition of a large newspaper that he had read only once, he repeated straight through, starting with the editorial and ending with the last page.—*P. Plaut* (Berlin).

94. **Gamble, E. A. McC. A study of three variables in memorizing.** *Amer. J. Psychol.*, 1927, 39, 223–234.—An extended investigation is reported of the effect of length of series, rate of presentation, and number of presentations upon the memorizing of nonsense syllables as tested by the method of right associates. The writer, who possessed great facility in memorization and who made use of a synesthetic schema, served as subject throughout. For a learner of this type, the kind of performance required by the method does not become proportionally difficult as series-length increases, as rate of presentation increases, or as number of presentations decreases. Number of presentations makes somewhat more difference than does rate of presentation, and rate makes more difference than does length of series. The experiments should be repeated upon a learner of different type.—*G. J. Rich* (Bellevue Hospital).

95. **Jette, P. L. A study of the learning curve for two systems of shorthand.** *J. Exp. Psychol.*, 1928, 11, 145–160.—A determination of the form of the learning curve of the Gregg and of the Burnz system by analysis of the records of a large number of students over a long time (the amounts of practice ranged from 4 to 600 hours). The Burnz system is of the Pitman type. The tests used were the 10 forms of Hoke's Shorthand Vocabulary Tests. Two equations are determined which best represent, respectively, the plotted scores from 915 tests of the Gregg students and from 273 Burnz tests. For all practical purposes the influence of practice may be considered negligible after 300 hours of study of the Gregg system and after 400 hours of study of the Burnz.—*F. A. Pattie* (Harvard).

96. **Jones, H. E., Conrad, H., & Horn, A. Psychological studies of motion pictures. II. Observation and recall as a function of age.** *Univ. Calif. Publ. Psychol.*, 1928, 3, 225–243.—Another aspect of the senior author's psychological survey work in rural Vermont (see II: 1504, 2927). "Completion and multiple choice tests were constructed for three moving pictures, covering the verbal and pictorial content of eleven reels. 765 test records were obtained from representative rural groups in eight villages, in an age sampling of from ten to sixty years. The reliability of the tests ranges from .89 to .95 in different age groups. In the scores for each test, growth is maintained up to the early twenties; a marked decline occurs beyond the age of forty-five. In a smoothed composite, constructed from sigma scores, development is approximately rectilinear to fifteen, with negative acceleration to the age of twenty-three. In the age group from forty-five to sixty, the composite scores show a rectilinear decrease; by the age of fifty-five, the median has dropped to a position below the average for thirteen years. The coefficient of variability is approximately constant, increasing slightly in the upper ages. The general form of the age curve is not due to special selection within the communities studied. The inferiority of the older groups is not due to a speed handicap in performing the tests, nor to factors involving interest in the pictures, visual acuity, or education."—*R. R. Willoughby* (Clark).

97. **Judd, C. H. Reduction of articulation.** *Amer. J. Psychol.*, 1927, 39, 313–322.—Counting numbers is more rapid when silent than when oral. There are individual differences in this respect. Similarly, there are individual differences in the ability to count silently series of sounds and of flashes of light. Those *S*'s who had achieved a higher degree of economy in counting exhibited a correspondingly high degree of economy in silent reading. Learning is a process of gradual adjustment in which certain primitive forms of response merge into new and more economical forms of reaction. During the child's mastery of language, reading and interpretation of number the purely vocal reaction becomes less and less prominent. Reduction of articulation is a correlate of the development of an internal system which centers in reaction to meaning rather than in pronunciation.—*G. J. Rich* (Bellevue Hospital).

98. **Laslett, H. R. A demonstration method of studying the learning process.** *Amer. J. Psychol.*, 1928, 40, 168–169.—Problems in the learning process may be worked out by a large class by means of series of multiplications of two-place numbers by two-place numbers, with a weighted system of scoring.—*G. J. Rich* (Bellevue Hospital).

99. **Löser, J. Teilgedächtnisse bei Debilen.** (Special memory-ability in mental defectives.) *Hilfsschule*, 1928, 21, 156–161.—In general, mentally deficient persons have very little memory, for memory and mental development are definitely correlated. Binet in his extensive investigations of imbeciles and mental defectives, however, came across individual cases of good memory. Löser, stimulated by the literature on this subject, has been on the lookout for extraordinarily developed special memory ability, that is, so-called partial memory, among his pupils. He used the system of Rossolimo-Bartsch in his investigations, in which the highest figure in the profile is 10. He found a pupil with

an ability to attend of 8.5 in this 10-point profile-scale; for the capacity of his memory the result was 7.39. His visual memory for ciphers reached a height of 10. The forgetting of figures so received was only 10% as compared to the normal average of 20%. For visually received words the profile number was only 8; forgetting, however, was 87.5%. The profile number of auditorially received material was 6. Since the pupil, who was the subject of this experiment, reached only the profile height of 5.66 for his associative processes, he derived very little advantage from his special memory-ability.—*O. Seeling* (Berlin).

100. **Murray, E. A note on recognition.** *Amer. J. Psychol.*, 1927, **39**, 259–263.—Recognition is essentially a pivoting of perceptual contents (reinforced by motor adjustments which are projected into the pivotal feature), which connotes a momentary stability in time. The experience fits systematically between cognition and esthetic perception. In the unrecognized there is no single motor set and no relatively stable innervation.—*G. J. Rich* (Bellevue Hospital).

101. **Ogden, R. M. Learning as improvement.** *Amer. J. Psychol.*, 1927, **39**, 235–258.—Learning is considered as an improved method of behavior which includes both the satisfaction of a creature's needs and the solution of its problems. It consists in coordinating the members in a course of action, so that perfection is observable both in the action itself and in its product. There are four ways of improvement: differentiation, assimilation, gradation and readjustment. In differentiation a more integral form sets itself off from the less integrated ground from which it arises. Assimilation is the integration of two or more particulars into a whole. In gradation a feature of a particularized whole emerges. Redefinition is versatilization of what is previously particularized.—*G. J. Rich* (Bellevue Hospital).

102. **Peterson, J. Forced adjustment vs. association in constructive learning and thinking.** *Amer. J. Psychol.*, 1927, **39**, 264–282.—The doctrine of associationism, even in its modern form as the "conditioned reflex," does not fit the facts of experimental psychology. Contiguity alone is not sufficient to explain constructive learning, learning involving the elimination of "wrong" responses. Those who apply the laws of association overlook or explain away many of the inconsistencies of their data. The part that any movement plays in the adjustment of the organism affects the probability that it will be repeated. The so-called law of effect introduces the principle of the retroactive effect of pleasure as an unconditioned force. The whole series of reactions known as mental activity may be considered as forced, on the one hand, by the "drives" or stimulation of intraorganic changes, and, on the other, by external stimuli. The latter present the possibilities of the behavior activities and give direction to the inner metabolic drives. All resolving or deciding responses, like choice, judgment, reasoning, volition, etc., are forced reactions brought about by obstructions of such a nature that the organism cannot continue smoothly its line of activity.—*G. J. Rich* (Bellevue Hospital).

103. **Poffenberger, A. T. The effects of continuous mental work.** *Amer. J. Psychol.*, 1927, **39**, 283–296.—In continuous addition a reduction of output of 20% occurred, with recovery of less than half of it in a 10-minute rest. In judgment of compositions there was no clear decrease in quality of work, although there was an increase in quantity of work done of a given quality. In completion of sentences and in intelligence tests there was no reduction of output resulting from long continued work. It is suggested by the results that the more nearly the work involves the continuous exercise of a single function the more will the output of work decrease, and the more varied the functions involved the less will the output decrease.—*G. J. Rich* (Bellevue Hospital).

104. **Poffenberger, A. T. The effects of continuous work upon output and feelings.** *J. Appl. Psychol.*, 1928, **12**, 459–467.—The subjects worked at continuous addition, sentence completion, judging compositions, and intelligence tests for about 5½ hours per task, and reported their feelings at the end of each 20–30 minutes in terms of a 7-point scale from extremely good to extremely tired. 10–15 subjects were used. There is a uniform diminution in the feeling report, but it is not related to the average change of output of work; considering individual cases, there is a suggestion that the cases extreme in change of output are also extreme in change of feeling.—*R. R. Willoughby* (Clark).

105. **Robinson, E. S. The "similarity" factor in retroaction.** *Amer. J. Psychol.*, 1927, **39**, 297–312.—The effect upon reproduction of similarity of interpolated material to that previously memorized was measured in the case of the memory span for consonants. Two sets of 4 or of 6 consonants were presented to the *S* so that the original and interpolated lists formed a continuous presentation. The second list varied with respect to the number of items common both to it and to the first list from all to none. Both visual and auditory presentations were used. With exceptions that may be due to statistical accident, it was found that the recall of the first list decreased with decreasing similarity of the second list to it.—*G. J. Rich* (Bellevue Hospital).

106. **Schaefer, J. Die erlebte Wortbedeutung bei Darbietung von Einzelwörtern.** (The experienced meanings of words singly presented.) *Arch. f. d. ges. Psychol.*, 1928, **61**, 129–196.—This research is an attempt to determine whether imaginal and imageless representations of word-meaning are two entirely different types of experience, or whether they have a common foundation and a unitary origin. It was found that meaning-experiences are of manifold variety; in the great majority of cases they are imaginal. Seldom, however, does the name of an object evoke a faithful representation of the original; more commonly one has an image of characteristic parts of the object. In a few cases the subject reports an imageless awareness of meaning —in the form of a knowledge about the object and

its sphere of relations or in the form of a feeling of familiarity. But a careful study of such cases frequently reveals that the supposed imageless awareness was an illusion. The author interprets his results in terms of a theory of "three layers in consciousness." The lower layer includes the original representations of perceived objects. The layer above this contains knowledge of relations between these objects, and the ideas which are founded on this knowledge ("schematic ideas"). The highest layer includes a still more abstract knowledge, which, however, is always based on imaginal stuff. Here we find meaning-awareness *par excellence*, with the imaginal component quite in the background. The more familiar and abstract a word, the less prominent are the imaginal elements in the meaning-experience. The final conclusion is that very little in the way of an image is necessary for the representation of a word-content, but that probably one must always assume an imaginal foundation.—*D. McL. Purdy* (California).

107. **Thorndike, E. L. The law of effect.** *Amer. J. Psychol.*, 1927, **39**, 212–222.—Experiments in which the subjects estimated the relative lengths of strips or drew lines of given lengths blindfolded and were told after each reaction whether it was right or wrong indicate a considerable gain in accuracy as compared with control series where no such information was given. The result appears to be due to the strengthening of a connection by a satisfying after-effect rather than to a ratiocinative process or to an ideational repetition of the connection.—*G. J. Rich* (Bellevue Hospital).

108. **Thorndike, E. L., Bregman, E. O., Tilton, J., & Woodyard, E. Adult learning.** New York: Macmillan, 1928.—This book presents a survey of the literature and a mass of new data on quantitative and qualitative changes in learning ability between the ages of about fifteen and forty-five. The experimental work consisted of the following items: measuring the progress of Sing Sing prisoners who were taking subjects in the prison school; testing the learning ability of prisoners on number-letter substitution and on addition; testing university students on ability to learn to write with the wrong hand and on ability to learn Esperanto; measuring the progress of pupils in evening high schools; measuring the progress of pupils taking typewriting and shorthand in secretarial schools. Results thus obtained were corrected for differences in intelligence, time spent in study, and other variables. Experiments not so well controlled were conducted on the ability of graduate students to learn code substitution and to learn to connect three place numbers with nonsense syllables. School grades of students in Teachers College, also without controls for intelligence, are presented with the other data. Sheer modifiability was tested by having twelve individuals at each of two different age levels learn to draw straight lines of specified lengths while blindfolded. Nearly all data from the above experiments show a maximum at twenty to twenty-four years and a gradual drop from that time on. The results are made comparable by calculating, for each experiment, the percentage which the gain in learning by the subjects thirty-five years of age or over is of the gain by the subjects twenty to twenty-four years of age. These percentages are: for the university group: drawing lines, 64%; wrong hand writing, 72%; substitution, 81%; learning code, 61%; Esperanto, 79%; learning numbers to fit nonsense syllables, 64%; university studies, over 100%; for the prison group: substitution, 104%; elementary school studies, 88%; addition practice, 96%; for the evening high school group: regular studies, 87% for age 30 or over; for the secretarial group: typewriting, about 95% for age 30 or over; shorthand, about 100% for age 30 or over. Testimony gathered from 99 persons shows that almost anything is learnable up to the age of fifty or later and that most people expect greater increase in difficulty for some kinds of learning than for others as age advances. Evidence is brought to show that strength, speed, sensory discrimination, intelligence and retention decrease slightly with age but less than learning ability. Older people show slightly less aptitude in dealing with novel tests than young ones. The practice curve, plotted on the basis of percentages of total learning, shows the same form for all ages. In discussing practical applications, the relative advantages of learning in childhood and adulthood are listed. It is concluded that loss in learning ability with age is often compensated for by added incentives, better selection of material, and other factors. Many charts and tables supplement the text. Over one-third of the book is devoted to appendices which present the data in detail. There is a bibliography of about 65 titles.—*M. N. Crook* (Clark).

109. **Trow, W. C. Recall vs. repetition in the learning of rote and meaningful material.** *Amer. J. Psychol.*, 1928, **40**, 112–116.—In learning digits, abstract nouns, concrete nouns and a descriptive paragraph, it was found that recall of the material was more effectual in producing retention than was re-presentation without recall. Better retention for periods of one day was secured by distributed than by massed presentation.—*G. J. Rich* (Bellevue Hospital).

110. **Verwoerd, H. F. The distribution of "attention" and its testing.** *J. Appl. Psychol.*, 1928, **12**, 495–510.—The study is an examination of the results to be obtained with the "attention- and fatigue-meter" of Piorkowski. This is a box with ten slots, each provided with a button; at the appearance of a strip in any slot, the subject presses the corresponding button; the total number of strips appearing and the total number reacted to are counted electrically. This apparatus was changed by attaching a counter to each of the ten slots, and 25 subjects were used. Introspective reports showed that instead of the device being a test of attention, most of the subjects reacted during a condition of inattention; also, the distribution of efficiency over the ten keys was of all degrees of evenness. 15 subjects were tested with altered instructions, in which the reaction was made with the left hand on the fourth button when a strip appeared in any of the first five slots,

and with the right hand on the seventh button when a strip appeared in any of the second five slots. This proved to be a test of attention; there are large individual differences both in general efficiency and in evenness, but the two are not correlated.—*R. R. Willoughby* (Clark).

111. **Wilcocks, R. W. On substitution as a cause of errors in thinking.** *Amer. J. Psychol.*, 1928, 40, 26–50.—"The problem treated is that of errors in task-directed processes of thought, the particular point at issue being Selz's denial that processes take place in such cases according to the law of substitution. After a statement of Selz's own theory and an analysis of the meaning of the law of subsitution, experimentally obtained introspective data are advanced to prove that the validity of the law of substitution must be assumed in order to explain errors of thinking arising in a certain type of task-directed cognitive processes. This type of case is characterized by the fact that solutions occur for which the anticipatory conditions are relatively unfavorable since they do not agree with the anticipation. As against Selz it is shown that such facts make it necessary to assume the validity of the law of substitution as a basis of explanation, supplementary to that advanced by him, namely, partial efficiency of the *Aufgabe*. A number of arguments advanced by Selz against the law of substitution are then analyzed with a result in full agreement with that stated."—*G. J. Rich* (Bellevue Hospital).

[See also abstracts 80, 138, 450, 471.]

NERVOUS SYSTEM

112. **Burridge, W. On the composition of excitation processes.** *Quar. J. Exper. Physiol.*, 1928, 18, 315–322.—The processes of excitation in tissues may have composition as well as size. Some suggestions are made concerning the application of this hypothesis to mental phenomena and behavior.—*L. Carmichael* (Brown).

113. **Kappers, C. U. A. The corpus striatum, its phylogenetic and ontogenetic development and functions.** *Acta Psychiat. et Neur.*, 1928, 3, 95–106.—Before dealing with the corpus striatum itself the writer discusses somewhat in detail the general subdivision of the neural tube, pointing to the sulcus limitans as a very important brain mark, as it indicates the limit between the sensory (alar) and motor (basal) region of the tube. Then follows a short survey of the progressive evolution of the striatum in amphibia, reptiles, and birds, with a subsequent discussion of the corpus striatum in mammals and man. The entire exposition is based on recent discoveries and special observations by the author himself and other brain physiologists. The corpus striatum in mammals and man, though developing according to the same principle as in reptiles (as illustrated by the author's observations on rabbits), differs in two respects: (1) by the fact that the neostriatum has considerably increased, and (2) by its shape. The functions of the striatum and the nuclei related to it are connected with motility, as might be seen, for instance, from degenerations appearing in several spastic diseases. Apparently the tonic innervation of the muscles is influenced by the striatum. It would be interesting to know whether this has anything to do with the sympathetic or accessory innervation of voluntary muscles discovered by others workers, and all the more so since degenerations of the striatum may be accompanied also by other sympathetic disturbances; for instance, in functions of the bladder and intestines, and in that of perspiration. As far as the difference in function between the neo- and palaeostriatum in mammals and man is concerned, all the clinical and pathological facts at hand at the present time indicate that we have a relation between those two parts similar to the relation found in reptiles—the palaeostriatum being more efferent, the neostriatum more receptive and correlative in function. The text is illustrated by original cuts.—*M. L. Reymert* (Wittenberg).

114. **Kappers, C. U. A. The development of the cortex and the functions of its different layers.** *Acta Psychiat. et Neur.*, 1928, 3, 115–133.—Illustrating his text by cuts and taking into account all recent work and discussions in his deductions from personal research, the writer arrives at the following main conclusions: (1) The phylogenetic evolution of the palaeocortex and archicortex shows that the development of cortical gray matter from the periependymal matrix is a neurobiotactic result of the superficial position of the afferent cortical fiber systems, as rightly pointed our by Kuhlenbeck. (2) The first differentiation, as it is found in the archicortex of reptiles and the palaeo- and archicortex of mammals, gives rise only to two different cell-layers; a granular receptive layer near the surface where most afferent impulses run, and a deeper or subgranular, efferent pyramidal layer. (3) In the neocortex, in addition to these two layers, a third layer develops more superficially, forming the supragranular cells which develop from the granularis. The development of these cells is a consequence of the increase of corticopetal and associative fibers. (4) If callosal fibers do not only end (v. Valkenburg) but partly also originate in supragranular pyramids, this would only more emphasize the associative function of this layer. (5) The correlative character of the supragranular cells also accords with the fact that in higher animals these cells increase much more than any other layer of the cortex. (6) A similar increase of receptor correlative cells in comparison to effector parts is observed in the striatum, the cerebellum, and in the motor centers of the oblongata.—*M. L. Reymert* (Wittenberg).

115. **Kappers, C. U. A. Three lectures on neurobiotaxis and other subjects.** Copenhagen: Levin & Munksgaard, 1928. Pp. 76.—The first lecture on neurobiotaxis, a psychical law in the structure of the nervous system, attempts to account for the law of association on the basis of comparative anatomical researches. The second lecture deals with the corpus striatum, its phylogenetic and ontogenetic development and functions. The third lecture is on the development of the cortex and the function of its

different layers. The phylogenetic evolution of the palaeocortex and archicortex shows that the development of cortical gray matter from the periependymal matrix is a neurobiotactic result of the superficial position of the afferent cortical fiber systems.—*R. Stone* (Clark).

[See also abstracts 142, 143, 149, 199.]

MOTOR PHENOMENA AND ACTION

116. **Allen, F., & O. Donoghue, C. H. The post-contraction proprioceptive reflex, its augmentation and inhibition.** *Quar. J. Exper. Physiol.*, 1927, **18**, 199–242.—The direct mathematical statement of the relationship between initial stimulus and magnitude of post-contraction is given. The result is in agreement with Fechner's law.—*L. Carmichael* (Brown).

117. **Anders, P. Über den individuellen Eigenrhythmus beim menschlichen Gange und seine Beziehungen zum Rhythmus der Herz- und Atemtätigkeit.** (On the individua' rhythm of the human gait and its relations to the rhythm of activity of the heart and respiration.) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 287–299.—Each person has a movement rhythm peculiar to himself. This tempo and that of his pulse and breathing are related, but the relation is typical for each individual only. The five children studied and two of the ten adults showed a tendency toward a 1 to 1 relation between walking rate and pulse. It is concluded that there are two groups of people, of which the one is influenced in the tempo of movement by the pulse tempo, while the other apparently is not influenced in movement rate by the pulse. The propriety of adjusting rhythmic gymnastic exercise to bodily tempos is pointed out.—*L. T. Spencer* (Yale).

118. **Anochin, P. Über die Bedeutung des Blutdruckes für die aktiven Kontraktionen der Capillargefässe.** (On the significance of the blood pressure for active contractions of the capillaries.) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 410–423.—The cycle of contraction of the artery, under a moderately strong stimulus, terminates earlier than the active contraction of the capillary can begin. This prevents proper demonstration of an active contraction in the latter under normal conditions of circulation. But if the artery be compressed, or if a stimulus strong enough to cause a persistent spasm of the artery be used, after an interval the capillaries exhibit a contraction due to diminished blood pressure. Reflex contraction of the capillaries may be easily produced when blood pressure is greatly diminished. It is therefore proper to speak of a specific innervation of the capillary wall.—*L. T. Spencer* (Yale).

119. **Arnold, A., & Krzywanek, Fr. W. Ein weiterer Beitrag zu der Frage der Erythrocytenvermehrung im menschlichen Blut nach Körperlicher Arbeit.** (A further contribution to the question of the increase in erythrocytes in human blood after bodily work.) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 361–365.—After running up and down a pair of stairs from 6 to 22 times an increase in the number of red blood-corpuscles is shown by a sample of blood. Comparisons are given of the increases obtained in blood drawn from the lobe of the ear, from the finger tips and from the tip of the great toe, and also from a vein in the arm. The increase shown by blood from the arm is in general much the greatest, amounting to as much in one case as 88.6%. Average values for 10 subjects are: arm, 37.4%; lobe of ear, 9.5% (reduced by occasional negative values); finger, 15.8%, and toe, 5.2%. It is concluded that for such determinations blood should be drawn from large veins, such as from the arm, rather than from the capillaries such as are found in the other regions tested.—*L. T. Spencer* (Yale).

120. **Austregesilo, A. Synreflexia** (association of reflexes). *J. Nerv. & Ment. Dis.*, 1928, **68**, 1–10.—A study of several groups of associated reflexes with a review of their history.—*R. A. Young* (Boston Psychopathic Hospital).

121. **Benedict, F. G. Age and basal metabolism of adults.** *Amer. J. Physiol.*, 1928, **85**, 650–664.—Results from four subjects, three of which were men, show a decline in basal metabolism with advancing years. This result is obscured in the case of one subject by the fact that his physical vigor has remained very strong for a number of years. It is suggested that basal metabolism tests may be of great significance in indicating the relative physical fitness or physical powers of the individual.—*M. J. Zigler* (Wellesley).

122. **Blount, W. P. Studies of the movement of the eyelids of animals: blinking.** *Quar. J. Exper. Physiol.*, 1927, **18**, 111–125.—Definitions are offered for *blink, wink, half-blink, pseudo-blink, pseudo-wink, flick, flink,* and *full closure* of the eye. A comparative study of blinking in various animals, birds, and in the human infant and adult is given. The evolution and physiology of blinking is considered.——*L. Carmichael* (Brown).

123. **Bowman, H. The effect of practice on different dextrality types.** *Amer. J. Psychol.*, 1928, **40**, 117–120.—Practice in the use of a pegging-board showed an increase in the rate at which pegs were placed in the board for both hands. There was a decrease in the R/L ratio for all right-handed *S's* and an increase for the left-handed *S*. Speed in pegging may be significant of the handedness formula.—*G. J. Rich* (Bellevue Hospital).

124. **Collier, R. J., Densham, H. B. A. R., & Wells, H. M. The influence of respiratory movements on the cutaneous circulation.** *Quar. J. Exper. Physiol.*, 1927, **18**, 290–296.—Cutaneous vaso-constriction compensates for the changes in blood pressure due to forced respiration. This is due to the active respiratory movements. This fact is important in understanding the so-called psychogalvanic reflex.—*L. Carmichael* (Brown).

125. **Densham, H. B. A. R., & Wells, H. M. The mechanism by which the electrical resistance of the skin is altered.** *Quar. J. Exper. Physiol.*, 1927, **18**, 175–184.—Changes in the resistance of the skin are shown to be caused by the unequal tension exerted by the vascular loops of the cornium on the epi-

dermis when they contract or dilate.—*L. Carmichael* (Brown).

126. **Densham, H. B. A. R., & Wells, H. M. The effect of the circulation on the skin-constrictor (psycho-galvanic) reflex.** *Quar. J. Exper. Physiol.*, 1927, **18**, 283–289.—This paper substantiates the view that the so-called psychogalvanic reflex is not exclusively due to changes in the sweat glands, but to the effect of circulation on the resistance of the skin. Cutaneous vaso-constriction causes a fall in resistance, vaso-dilation causes a rise. These results are based upon various experimental studies and upon certain diseased cases.—*L. Carmichael* (Brown).

127. **Dodge, R. Protopraxic and epicritic stratifications of human adjustments.** *Amer. J. Psychol.*, 1927, **39**, 145–157.—The traditional classification of human responses as reflex, instinctive, habitual, and voluntary, as though they were discrete levels of behavior, involves a simplification fallacy. Adaptive acts of the adult human are really complicated responses determined at various levels of integration. They begin as relatively crude approximate or protopraxic adjustments of short latency and develop into more adequate epicritic adjustments, according to the equipment of the individual, by stages that are often indistinguishable. Protopraxic and epicritic are not the names of entities of behavior, but are purely relative terms referring to greater or lesser elaboration of the sensory data. All normal overt human adjustments to environmental change include both protopraxic and epicritic factors. In adult humans there seem to be no instinctive patterns at all in the sense of uniformities of configurations of response. Probably all reactions have relatively protopraxic beginnings, but no adult reaction except in extreme emotional inhibition is completed on the primitive level on which it starts.—*G. J. Rich* (Bellevue Hospital).

128. **Farrell, J. I. Contributions to the physiology of gastric secretion.** *Amer. J. Physiol.*, 1928 **85**, 672–687.—With the vagi divided for the purpose of eliminating "psychic secretion," various food substances were placed in the artificial pouch which was made of the entire stomach of dogs. The gastric mucosa was stimulated by such food substances as meat, egg albumen, casein to liberate "secretogogues." This result confirms the discovery of Pavlov that secretogogues are thus released. In another experiment, it is demonstrated that the vagi constitute the "sole efferent pathways for the psychic phase of gastric secretion."—*M. J. Zigler* (Wellesley).

129. **Fearing, F. The history of the experimental study of the knee-jerk.** *Amer. J. Psychol.*, 1928, **40**, 92–111.—The more important studies of the patellar reflex since its discovery in 1875 are briefly reviewed. It has received more laboratory attention than any other tendon-reflex and has been used to study such problems as those of neural inhibition and the effects of drugs. There are serious technical difficulties in connection with standardization of the stimulus and registration of the response.—*G. J. Rich* (Bellevue Hospital).

130. **Fritz, G. Beiträge zum Mechanismus der Blutzuckerbeeinflussung durch Hypophysenextrakte.** (Contributions on the mechanism of the influence of extract of the hypophysis on the blood-sugar.) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 101–106.—Extract from the posterior lobe of the hypophysis, injected in muscle, produces in mammals an increase in blood-sugar. This action is indirect and is produced by a mobilization of adrenalin; for the effect is lacking in animals from which the adrenals have been removed. This mobilization is the result of a general excitation of the sympathicus.—*L. T. Spencer* (Yale).

131. **Gerard, R. W., & Forbes, A. Fatigue of the flexion reflex.** *Amer. J. Physiol.*, 1928, **86**, 186–205.—Description of a method for measuring the "line busy" effect following a flexion reflex. A method is given for determining to what extent the fall in reflex response with repeated stimulation is due to the "line busy" effect and to what extent to fatigue or equilibration. It is concluded that the progressive decline in reflex response on repetition is due only in small part to the "line busy" effect. Another factor or factors must play a rôle, and a fatigue effect analogous to that of equilibration in peripheral nerve is suggested.—*M. J. Zigler* (Wellesley).

132. **Gollwitzer-Meier, Kl. Anoxämie und Kreislauf.** (Anoxaemia and circulation.) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 434–447.—Moderate reduction of the oxygen content of the air breathed to about 120 mm. pressure produces in the dog only slight circulator disturbances. Arterial and venous pressure are unchanged; frequency and cardiac volume per minute sometimes increase somewhat. With greater reductions in oxygen pressure, below 100 mm., there occur moderate increase in arterial pressure, increase of the frequency without corresponding decrease in the volume per beat, accompanied therefore by an increase in volume per minute. Nevertheless the venous pressure increases somewhat. When the pressure sinks below 40 mm. the volume per minute may fall below the normal value, while the beat-frequency still further increases. The power of the heart thus fails and the venous pressure becomes greater as a result of the insufficiency of the heart. In the final stage of anoxaemia there occurs a vagus excitation, with pronounced reduction in beat-frequency and volume per minute and rise in venous pressure. Respiration follows these changes in a close parallelism. Respiratory volume increases with progressive anoxaemia. The vagus excitation appearing in the final stage is associated with a reversible paralysis of the respiratory center. It is assumed that the regulation of circulation and of breathing, during oxygen deficiency, is a central phenomena. The effective condition of the various changes is concerned with the H-ion concentration, not in the blood, but in the nerve centers. Final collapse of function appears to be due to central injury.—*L. T. Spencer* (Yale).

133. **Grollman, A. The effect of variation in posture on the output of the human heart.** *Amer. J. Physiol.*, 1928, **86**, 285–301.—The results of this study show that, in normal young men and women, variation in posture (recumbent, sitting and erect) occasions no change in cardiac output (circulatory minute volume).—*M. J. Zigler* (Wellesley).

134. **Gustafson, F. L., & Benedict, F. G. The seasonal variation in basal metabolism.** *Amer. J. Physiol.*, 1928, **86**, 43–58.—The basal metabolism of twenty young college women was measured monthly during the academic session of nearly two years. The results indicate that metabolism tends to be low in winter and rises to a higher level in spring and summer. There is slight evidence in many of the results that during the menstrual period the basal metabolism may drop to a lower level.—*M. J. Zigler* (Wellesley).

135. **Hartman, F. A., Evans, J. I., & Malachowski, B. T. Effect of fatigue upon the circulation and fibers of skeletal muscle.** *Amer. J. Physiol.*, 1928, 86, 238–242.—Description of a method by which changes in the appearance of muscle fibers and capillaries may be observed during the continuous stimulation of the muscle through its nerve. During stimulation the muscle becomes more transparent, undergoes continuous transverse twitchings, the striations are more clearly observable, and the capillaries dilate. These effects persist for several minutes after a long period of stimulation. Intravenous injection of lactic acid and increase in carbon dioxide cause the capillaries to dilate and produce a hazy field.—*M. J. Zigler* (Wellesley).

136. **Hirsch, E. W. Relation of bladder pressure to bladder function.** *J. Amer. Med. Asso.*, 1928, 91, 772–775.—The so-called bladder contraction is due to periodic intra-abdominal waves which are caused by contractions of the diaphragm. Ordinary psychic states and sensory conditions do not affect the bladder directly, although there is a temporary obliteration of the normal bladder wave. Intense psychic reactions will greatly augment respiration and stimulate urination by increased intra-abdominal pressure waves.—*G. J. Rich* (Bellevue Hospital).

137. **Hocart, A. M. A theory of the smile.** *Psyche*, 1928, **32**, 89–91.—No satisfactory explanation of the smile has been given by the psychologist. However, the function of laughter has received some attention, and this may be regarded as more or less satisfactory. However that is function and not origin. While comparative psychologists have been unduly cautious in this matter it is worth while to consider that the animal's expression is the same as our smile. A dog opens its mouth when it is pleased. It draws back its mouth at the corners and bares its teeth. It does this when it is tickled under the "arm pits" while it is lying down. The reaction is similar to that of a man when so tickled. A playful puppy assumes an attitude and an expression similar to that of a person who is pleased. The puppy may go so far as to bite the hand of his master playfully. The smile may be a mere getting ready to bite. The dog's smile is more archaic. In man the smile has been retained as an index of mind.—*T. R. Garth* (Denver).

138. **Humphrey, G. The conditioned reflex and the laws of learning.** *J. Educ. Psychol.*, 1928, **19**, 424–430.—Suggests that there is no *a priori* reason why Pavlov's findings should apply to human beings. In his experiments a stimulus which had been conditioned did not produce its accompanying R when it was imbedded in a complex. Sometimes, too, it was very difficult to get the conditioning to appear. Instead of simultaneous presentation of stimuli the secondary S was always given first. The law of repetition seems also to be troublesome, for at times responses will be attached to stimuli after one repetition. Finds that stimuli do transfer from one S to another. Particularly is this true at a certain stage of the procedure. The "extinction" process also behaves peculiarly on occasions and does not seem to be related to fatigue.—*A. M. Jordan* (North Carolina).

139. **Jacobson, E. Quantitative recording of the knee-jerk by angular measurement.** *Amer. J. Physiol.*, 1928, **86**, 15–19.—The ordinary knee-jerk record is open to the criticism that an equal vertical distance near the base line and near the summit of the curve is not produced by the same angle of jerk. An apparatus which rules out this error in the ordinary kymographic record of the knee-jerk is described.—*M. J. Zigler* (Wellesley).

140. **Jacobson, E. Differential relaxation during reading, writing and other activities as tested by the knee-jerk.** *Amer. J. Physiol.*, 1928, **86**, 675–693.—The knee-jerk response in 40 subjects was measured at various intervals during a 60-minute period of reading or writing activity. With the exception of several highly nervous subjects, there was a clear relaxation in the mechanism of the jerk under favorable conditions of work. Exciting conversation, noises, and vigorous voluntary movement tended to prevent the decrease of the jerk. Intention not to relax also prevented the diminution of the jerk in the trained subject. Since neurotic or highly nervous subjects fail to show this effect of relaxation during the period of activity, while trained subjects under various conditions and untrained subjects under favorable conditions show the tendency to relaxation, the conclusion is drawn that differential relaxation is demonstrated. That is to say, the muscles required for reading or writing are in a state of contraction while other muscles not necessarily employed in the act are relaxed.—*M. J. Zigler* (Wellesley).

141. **Jeffress, L. A. Galvanic phenomena of the skin.** *J. Exper. Psychol.*, 1928, **11**, 130–144.—A comparison of deflections noticed when a galvanometer is connected in circuit with the body and a battery (Féré's phenomenon) and those occurring when the body alone is connected with a galvanometer (Tarchanoff's phenomenon). The coefficient of correlation between degrees of deflection under these two conditions is of the order of 0.95. The two phenomena also have the same latent period. The hypothesis to account for this relationship between

the deflections with and without external electromotive force is: Tarchanoff's phenomenon is due to action currents of sweat glands, which are shown by a current directed inward from the surface of the skin, accompanied by a change in permeability of the glands' membrane which results in a change in electrical polarizability. This latter change exhibits itself as a variation in counter electromotive force, with the consequent variation in apparent resistance known as Féré's phenomenon.—*F. A. Pattie* (Harvard).

142. **Johnson, C. A., & Luckhardt, A. B. The effect of moderate doses of ephedrin sulphate on the knee-jerk.** *Amer. J. Physiol.*, 1928, **86**, 614–617.—Experimenting upon dogs, it is found that moderate doses of ephedrin sulphate produce great increase in the reflex excitability of the spinal cord. Transection of the cord fails to reduce or prevent this response. Accordingly, the conclusion is stated that this effect is governed in the lower levels of the cord. —*M. J. Zigler* (Wellesley).

143. **Kauders, O. Keimdrüse, Sexualität und Zentralnervensystem.** (Endocrine glands, sexuality and the central nervous system.) Berlin: Karger, 1928. Rm. 10.80.—The first chapter is concerned with the secretion of the gonads and its effects on the organism, particularly through the endocrine balance. The second is a consideration of the experimentation bearing on the subject, particularly that on homosexual and heterosexual grafts and the localization of the nervous mechanisms concerned. The third examines the relations between modifications of the gonads and of the sexual instinct; the fourth continues the same topic, principally in its clinical aspects. In the fifth section, the author considers the relations of the central nervous system to the gonads and to sexual responses. In the last chapter, the psychic structure of the sexual instinct is analyzed.—*R. R. Willoughby* (Clark).

144. **Kodera, Y. Über die Reizzeitspannungskurve des curaresierten Froschmuskels.** (On the stimulus-time potential curve of curarized frog muscle.) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 268–273.—Plotting the stimulus time for excitation of the curarized gastrocnemius of the frog for various voltages up to four results in a curve exhibiting several abrupt sections, or changes of acceleration. This corresponds to the author's results with motor nerve (see II: 2708, 2709). This correspondence is correlated by the author with differential connections between specific nerve fibers and similarly specific muscle fibers. Irregularities of the curves are apparently not to be regarded as due to experimental error.—*L. T. Spencer* (Yale).

145. **Lipschütz, A. Transplantation von konserviertem Ovarium. III. Das mikroskopische Verhalten des isolierten und transplantierten Ovariums.** (Transplantation of preserved ovary. III. The microscopic behavior of the ovary when isolated and transplanted.) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 321–338.—Ovarial material, kept for from 8 to 16 days before transplantation and which had remained in the male animal for periods ranging from 35 to 159 days after transplantation, were studied microscopically. All material studied had become functionally active during the period following transplantation. The results are in general the same as are obtained with fresh material, except that when the tissue is preserved at room temperature without nutritive support a considerable damage occurs in the primary follicle. A reduction in the number of primary follicles therefore seems to be the cause of the delayed and uncertain functioning of preserved ovarial tissue often observed.—*L. T. Spencer* (Yale).

146. **Lombroso, U. Coordinazione chimica e coordinazione nervosa.** (Chemical and nervous coordination.) *Scientia*, 1928, **44**, 247–258.—The author is not convinced that internal secretions have a direct chemical action instead of an action stimulating to the sympathetic nervous system. He quotes Bayliss and Starling, Pavlov, Goltz, Popielski, Wertheimer, et al., and some of his own researches upon rats, as well as the case of a pair of Siamese twins.—*R. G. Sherwood* (Stillwater, Minn.).

147. **Lorente de Nó, R. Die Drehreflexe auf die Augenmuskeln.** (The turning reflexes on the eye-muscles.) *Arch. f. Ohvenk.*, 1928, **118**, 241–284.—This study is also of an anatomico-psychological nature. But the questions under discussion are fundamental for the psychologists of the senses. Two problems are to be solved: (1) As Mach has already brought out in the case of head movements, the currents in the semi-circular canals are directly proportional to the cosine between the plane of the semi-circular canal and the angle of the plane of revolution. Is the strength of the turning reflexes proportional to this angle? (2) If the head is so placed that no canal is in a horizontal position, lymph currents make their appearance in all the semi-circular canals. Do these currents influence each other? How are the stimuli of the different semi-circular canals correlated in the central nervous system? I shall mention two of the conclusions. An animal without horizontal semi-circular canals is incapable of movement. For instance, if it tries to run straight ahead it falls down. But it can remain quiescent. An animal without vertical semi-circular canals cannot bring its head into the normal spatial position. Horizontal semi-circular canals are the semi-circular canals of movement. Vertical semi-circular canals are the semi-circular canals of position. The vertical semi-circular canals (as Magnus and de Klejn have shown in another experiment) bring the eyes into the same focus which they will later maintain as a result of otolith stimulation (tonic reflex).—*B. Hirschfeld* (Berlin-Lichterfelde).

148. **Lorente De Nó, R. On the tonic labyrinth reflexes of the eyes.** (*Acta oto-lar.*, **9**, fasc. 1–2.) (Abstract by J. H. Junior, *J. de neur. et de psychiat.*, 1927, **6**, 444–445.)—By means of a special technique which allows a graphic demonstration, the author has shown that the ocular movements are always combinations of lateral, vertical and rotatory movements; every movement of the head brings the six ocular muscles into action. The labyrinth tonus is dependent not only on the position of the head but

also on the movement in space executed by the head in order to arrive at its new position. The mechanism of the tonic labyrinth reflex has not yet found a satisfactory explanation.—*H. C. Syz* (New York City).

149. **Luca, G. La reazione cerebrale e il tempo di reazione in rapporto a stimoli dolorosi.** (Cerebral reaction and reaction time in relation to painful stimuli.) *Riv. di psicol.*, 1928, **24**, 14–17.—The investigator measured cerebral circulation during the application of pain stimuli. The stimuli were rendered instantaneous and of equal intensity throughout. The subjects' attitudes as fear or expectancy, were found to be influencing variants in the experiment. —*T. M. Abel* (Illinois).

150. **Nepokoj, J. L'écriture et la lecture bilatérales.** (Bilateral writing and reading.) *J. de psychol.*, 1927, **24**, 747–751.—The author regards our unilateral reading and writing habits as physiologically and psychologically inconvenient and dangerous inasmuch as they lead to a "cultivated systematic deformation." He suggests the development in early childhood of bilateral writing and reading, as well as the use of both hands in the latter.—*N. L. Munn* (Clark).

151. **Noyes, W. A. Habit formation.** *Science*, 1928, **68**, 353.—In the absence of the concepts of "consciousness" and "purpose" what words can be used to designate the ability we have to do something contrary to our usual habit?—*G. J. Rich* (Bellevue Hospital).

152. **Pantalone, E. Contributo allo studio della scrittura a specchio.** (Contribution to the study of mirror writing.) *Riv. di psicol.*, 1928, **24**, 98–110.—Mirror writing of the left hand where no previous training occurred is discussed. One or two cases are cited. A possible explanation of this latent ability is offered along with suggestions about the organization of the nervous system that may be contributory. —*T. M. Abel* (Illinois).

153. **Parker, S., & Stengel, E. Klinische Untersuchungen über die Stützreaktion.** (Clinical studies of the support reaction.) *Zsch. f. d. ges Neur. u. Psychiat.*, 1928, **112**, 747–754.—After Magnus had discovered the support reaction (extended position of the lower extremities upon pressure on the balls of the toes in the form of dorsal flexion—"rigid columns") and Rademaker showed an inhibition of this static reaction in an animal from which the cerebellum had been removed and Schwab demonstrated the same reaction in a man suffering from cerebellar injury (homolateral), study was directed to the same reaction in chorea and athetosis. In these conditions the phenomena could be shown either upon typical or atypical stimulation; in chorea, moreover, similar phenomena appeared in the upper extremities. These findings confirmed the importance of the cerebellum in disturbances of movement. The fixation extension in chorea showed a distinct relationship with the support reaction. Athetosis can be looked upon as the recrudescence of a more deeply seated phylogenetic or ontogenetic movement mechanism.—*S. Krauss* (Heidelberg).

154. **Pavlov, M. Sur l'origine du sens du rythm.** (The origin of the rhythmic sense.) *J. de psychol.*, 1927, **24**, 719–730.—The author gives experimental evidence that "It is precisely . . . in the play of blood waves and in their strict relation with the world of emotions that the source of the rhythmic sense is found . . . the chief source of the rhythmic sense resides in the action exerted upon us by the 'expressive' play of the blood wave." The impression produced by a musical rhythm is correlated with the closeness with which it approximates the rhythm of the 'basal fractions,' the intervals between the contiguous crests of pulsatile waves produced by each systole." The experiment consisted in obtaining temporally identical rhythmograph and sphygmograph records from a group of young men, most of them between the ages of 17 and 25. Simultaneously with the playing upon the gramophone of a musical air, the rhythm of which was measured by tapping on a tambourine connected with a Marey tambour, a record of the subject's pulse beat was taken. There is an almost perfect correlation between the two records. The correspondence between the intervals of the rhythmographs and sphygmographs is as close as the intervals of two parts of the same pulse record. A short control experiment showed that a musical air not correlated with the systolic rhythm gave the subject no rhythmical impression. "It can therefore be experimentally demonstrated that every musical work which gives the feeling of rhythm reproduces the rhythm of pulsatile waves, and that those which do not reproduce these waves cannot awaken the rhythmic sense."—*N. L. Munn* (Clark).

155. **Pillsbury, W. B. What is native in the so-called instincts?** *Amer. J. Psychol.*, 1927, **39**, 41–53.—If the so-called instinct is analyzed into its final components, there prove to be three of these: the incentive to action, the movement that results, and the test of acceptability which induces repetition or continuance of the movement or determines that it shall not be repeated or continued. Each of these separate parts may be in part at least regarded as inherited tendencies. The restlessness which leads to action is a function of the fundamental protoplasm. Both the first movement and the ease with which movement may be established are innately determined. The test of acceptability also must be in large measure immediate, and what is learned can be no more than a transfer of a native reaction from one stimulus to another that produces the same response. The term instinct is convenient as indicating that something of the behavior of an individual is determined at birth. The number of activities that are determined by a preliminary restlessness or discomfort is so great that the class covers almost all activities. If we retain the term we must admit a considerable indefiniteness of acts for each instinct and grant that in the course of learning many of the separate satisfactions become connected or conditioned by one another.—*G. J. Rich* (Bellevue Hospital).

156. **Ponder, E., & Kennedy, W. P. On the act of blinking.** *Quar. J. Exper. Physiol.*, 1927, **18**, 89–

110.—Three methods for the experimental study of blinking were used. (1) A recording apparatus of great delicacy was attached to the eyelid and records were made by an appropriate lever on a smoked drum. (2) Subjects were kept in ignorance of the procedure by having a hidden key pressed by the experimenter. (3) A portable polygraph was used when experiments were carried on outside of the laboratory. Results show that the interval between blinks is remarkably consistent for a given individual under given experimental conditions. The movements are not strictly speaking reflexes. The rate of blinking is closely related to the "mental tension" of the subject. Blinking may be a relief mechanism whereby nervous energy otherwise unutilized passes into a highly facilitated path.—*L. Carmichael* (Brown).

157. **Richter, C. P. On the interpretation of the electromyogram from voluntary and reflex contractions.** *Quar. J. Exper. Physiol.*, 1927, **18**, 55–77.—Action currents were led off from the author's nonpolarizable electrodes to a Hindle string galvanometer. The grasping reflex was studied in twenty infants. Adults were used in some experiments. The galvanometer records were analyzed and an effort made to determine the origins of the various types of waves included. A theory is advanced on the basis of the records which suggests that voluntary activity may be dependent on impulses from the proprioceptive end organs.—*L. Carmichael* (Brown).

158. **Snyder, A. M., & Snyder, M. A. Eye preference tendencies.** *J. Educ. Psychol.*, 1928, **19**, 431–433.—410 students about equally distributed in high school, normal school, and university were tested with the authors' tests for eye preferences. About 15% have no eye preferences, i.e., are ambiocular. On the average 64% have a right monocular preference and 21% a left monocular preference. There seems to be no perfect agreement between hand preference and eye preference. The eye preference is not necessarily caused by the inferiority or superiority of one eye. In many cases the preferred eye is the weaker.—*A. M. Jordan* (North Carolina).

159. **Steggerda, M., & Benedict, F. G. The basal metabolism of some browns and blacks in Jamaica.** *Amer. J. Physiol.*, 1928, **85**, 621–633.—The results of measurements of basal metabolism tend to indicate closer correspondence between female browns and normal American women than between the males of these two groups. The results of tests of the blacks, of which there were only eight male cases, point to the same conclusion.—*M. J. Zigler* (Wellesley).

160. **Stiles, P. G. Human physiology.** (5th ed., rev.) Philadelphia: Saunders, 1928. Pp. 444. $2.25.—An elementary non-controversial survey of the field. 133 pages are devoted to muscles, nervous system, and receptors.—*W. S. Hunter* (Clark).

161. **Tegen, E. Moderne Willenstheorien.** (Modern theories of the will.) *Uppsala Universitets Arsskrift*, 1928, Filosofi, 1.—Detailed and trenchant survey of Münsterberg, James, Ebbinghaus, Ziehen, and Selz.—*A. Römer* (Leipzig).

162. **Templeton, R. D. A new method of graphic representation of the motor activity of the stomach in intact animals.** *Amer. J. Physiol.*, 1928, **85**, 512–517.—Description of a method whereby a nipple is inserted through the lumen of a fistula in the stomach for the purpose of taking records of changes in intragastric pressure. The tracings obtained by this method show a steady increase in intragastric pressure during the period of gastric quiescence, and a gradual reduction of pressure during periods of strong hunger contraction.—*M. J. Zigler* (*Wellesley*).

163. **Wakeham, G. Query on "A revision of the fundamental law of habit formation."** *Science*, 1928, **68**, 135–136.—The methods used in teaching pianoplaying are at variance with the principle postulated by Dunlap. The experience of teachers of music furnishes valuable data with respect to habit formation.—*G. J. Rich* (Bellevue Hospital).

164. **Wallon, H. La maladresse.** (Awkwardness.) *J. de psychol.*, 1928, **25**, 61–78.—Awkwardness, which is defined as an "habitual imperfection of movement," may be due to two factors. In the first place it may be attributed to the instruments of movement, but this is of minor consequence. In the second place one may attribute awkwardness to a deficiency in the instruments of control; namely, volition, images, ideas, etc., which have their seat, as far as movement is concerned, in the ascending frontal gyrus. Awkwardness has often been attributed to lesions of the latter, but the author considers this view "too simple and inexact." He says, "the sensations resulting from movement itself are necessary to its adequate execution, and awkwardness must be due to their depravity or to their absence." Several types of awkwardness, such as the learning of a new movement, habitual immobility, lack of coordination in the presence of others, etc., are discussed at length. "Perfection of an automatism," he claims, "is not brought about by having a certain linkage of muscular actions definitely fixed; it is, on the contrary, an increasing liberation in the choice of muscular actions to connect. The acquisition of an automatism consists in rendering adaptable the muscular movements which it will be necessary to utilize, to disengage them from every hindrance, and to resolve in each the aspects which it will be necessary to use alone."—*N. L. Munn* (Clark).

165. **Wells, H. M. The effect of the circulation on the electrical resistance of the skin.** *Quar. J. Exper. Physiol.*, 1927, **18**, 33–47.—The electrical resistance of the skin may be used as an indication of its vascularity. There is even some evidence that a start of fear which sends a "cold shiver down the back" is really dependent on circulation changes such as those that occur in real cold. Mosso's suggestion of the physiological mechanism at the basis of the expression "cold hands and a warm heart" is verified. It is not known how changes in blood vessels modify electrical resistance in the skin.—*L. Carmichael* (Brown).

166. **Williams, G. D., & Benedict, F. G. The basal metabolism of Mayas in Yucatan.** *Amer. J. Physiol.*, 1928, **85**, 634–649.—The results of this

study show that sub-tropical climate has no effect upon the basal metabolism of white men and women who make a stay of less than four months in Yucatan. The Mayas have a higher basal metabolism than whites, and this, it is pointed out, is probably due to a racial difference.—*M. J. Zigler* (Wellesley).

167. **Wittmaack, K. Das morphologische Bild im Wechsel des Tonus.** (The morphologic picture in the change of tonus.) *Arch. f. Ohrenhk.*, 1928, **117**, 241–284.—This is a detailed study of an anatomico-psychological nature which tells of many experiments of fundamental importance for the psychology of sensation.—*B. Hirschfeld* (Berlin).

168. **Woo, T. L. Dextrality and sinistrality of hand and eye. Second memoir.** *Biometrika*, 1928, **20A**, 79–148.—(For a preliminary study see *Biometrika*, 1927, **19**, 165–199; II: 100.) Measurements were made of the following ocular and manual characters on about 400 university students: (1) nearness at which diamond type could be read, (2) visual acuity by the Snellen test types, (3) spherical refraction, (4) general astigmatism, (5) grip, (6) "first pull and last pull" by means of a dynamometer, (7) difference of first and last pull, or lack of endurance in pulling, (8) steadiness of hand, and (9) balancing test. Laterality is taken as the difference of each measure for the two sides. It is concluded that in only a few of these measures are there significant differences in laterality among people generally, that there is a large variability in the percentage occurrence of each type of laterailty and that none of the percentages agree closely with the (simple) Mendelian ratio, that dominance of laterality in any one of these characters is not significantly associated with dominance of laterality in any other character, and that the distributions of lateralities for these characters form a continuous frequency curve with the largest frequencies near the middle, and are not bi-modal as would be expected if people were dichotomized into dextralists and sinistralists. The statistical methods employed comprise the comparison of obtained percentages with theoretically expected percentages, the calculation of correlation coefficients, and a comparison of obtained correlations with those which could arise from random sampling in a population in which the true correlation is zero.—*L. Ackerson* (Institute for Juvenile Research).

169. **Zawadovsky, B. M., & Sack, A. L. Über den Einfluss der Schilddrüse auf die höheren Nervenfunktionen der Hunde. I. Die Wirkung von Thyreoidea-Einzelgaben auf die bedingten Reflexe bei einfachen Versuchsverhältnissen.** (On the influence of the thyroid gland on the higher nerve functions of the dog. I. The action of single doses of thyroid on the conditioned reflexes under simple experimental conditions.) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 155–175.—Experimental hyperthyroidization of the dog produces, during the first day, a phase of general suppression of its conditioned reflex activity, especially a disturbance of differential reactions. The subsequent, second phase is marked by a general increase in excitability, by a shortening of the latent period, and by an increase both of the conditioned and of the unconditioned salivary secretion. This is often accompanied by extreme accuracy of differentiation, although occasionally by a brief return of the earlier suppression of discrimination.—*L. T. Spencer* (Yale).

[See also abstracts 13, 29, 30, 54, 76, 97, 101, 112, 170, 171, 174, 179, 201, 236, 239, 242, 255, 271, 395, 419, 421, 431.]

PLANT AND ANIMAL BEHAVIOR

170. **Allen, E. Precocious sexual development from anterior hypothesis implants in a monkey.** *Anat. Rec.*, 1928, **39**, 315–321.—A series of four implants of anterior lobe of hypothesis were made at two-day intervals in an immature female monkey. Marked development of secondary sex characteristics and considerable growth in the genital tract and mammary glands occurred during the seven-day interval before dissection. The effects were similar to those obtained in normal and castrated monkeys from injections of ovarian and placental hormone. Similar experiments on two monkeys with implants from dogs gave negative results. 1 plate.—*H. R. Laslett* (Oregon State).

171. **Asimoff, G. Bedingte Reflexe bei thyreoidektomierten Tieren.** (Conditioned reflexes in thyroidectomized animals.) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 350–355.—Conditioned reflexes to the sound of a metronome were set up in a thyroidectomized dog as promptly but never so reliably or strongly as in a normal control individual. The setting up of a second conditioned reflex to a bell was very difficult and but slightly successful. Investigation of the capacity of the animal for acquiring a differential conditioned reflex was rendered impractical, due to the instability of the original conditioned response and the low vitality of the dog as a result of the lack of thyroid secretion. The condition of the animal as described was clearly one of advanced myxedema. Results are interpreted as indicating disturbance of the nerve processes of the cerebral cortex. It is suggested that investigation of differential reflexes would permit further conclusions with reference to the cerebral effect of hypothyroidism.—*L. T. Spencer* (Yale).

172. **Beck, E. Das Hörzentrum des Schimpansen in seinem myelo-architektonischen Aufbau.** (The auditory center of the chimpanzee as to its myelo-architectonic construction.) *J. f. Psychol u. Neur.*, 1928, **36**, 325–349.—The structure of the temporal lobe of the chimpanzee's cerebrum is very similar to man's. This is in opposition to the findings of others regarding other higher apes. A detailed description of the areas is given.—*L. T. Spencer* (Yale).

173. **Brehm, A. E. Tierleben in einem Band.** (Animal life, in one volume.) Leipzig: Bibliographisches Institut, 1928.—*W. S. Hunter* (Clark).

174. **Britton, S. W. The prepotency of medulliadrenal influence in emotional hyperglycemia.** *Amer. J. Physiol.*, 1928, **86**, 340–352.—An aggressive dog excites in normal cats a marked increase in the blood sugar level. This result becomes less marked

in succeeding periods of excitement. Only slight reduction in hyperglycemia results when the splanchnic branches to the liver are divided, but there is profound reduction in animals which have been deprived of the adrenal medulla, although the general affective response remains essentially unaltered.—*M. J. Zigler* (Wellesley).

175. **Burbridge, B. Gorilla: tracking and capturing the ape-man of Africa.** New York: Century, 1928. Pp. 334. $3.50.—This book gives a popular account of the author's experiences on several trips into Central Africa. Included are descriptions of the territory visited; observations concerning the various wild beasts encountered, their habits and habitats, and considerable information concerning both the partly civilized pack-carriers of the safari and the uncivilized jungle peoples. Typical chapters are "On safari," "The wonderful dignity and self-control of natives," "Cannibals and pygmies," "Antelopes and bird life," etc. Lions and elephants afford material for three chapters each and four chapters are devoted to the mountain gorilla. The author tells much of the behavior of these great apes in their native haunts as observed by him while trailing and photographing them. He describes the capture of several of the young and their conduct while they were being tamed. One chapter is devoted to "Miss Congo," the young female gorilla which was brought to this country and kept at the author's home in Florida. Brief mention is made of her habits and of the psychological investigations by Yerkes, in which she served as subject. There are 45 illustrations, of which 16 are gorilla pictures.—*O. L. Tinklepaugh* (Yale).

176. **Combes, M. Une fourmilière dont les fourmies éteignent le feu.** (An ant-hill in which the ants extinguish fire.) *J. de psychol,* 1928, **25**, 181–188.—Observations relating to an ant-hill of *Formica rufa.* These ants were successful in extinguishing various types of fire placed near their ant-hill. This behavior was not instinctive because other ants of the same species in near-by ant-hills could not extinguish the fire placed near their nests, nor has the author noticed it in any other species of ant. Many members of the ant colony were sacrificed in these attacks on fire. The attacks were made with formic acid, but many of the ants were scorched when they came too close to the lighted material. The cooperation of the whole colony, she says, was especially noticeable. The experiment was repeated after a year's interval, the same response being manifested. Hence the author concludes that habit or instinct are insufficient explanations of such behavior. She claims that memory and intelligence can alone explain it. The courage of the ants is also remarked.—*N. L. Munn* (Clark).

177. **Fields, P. E. Form discrimination in the white rat.** *J. Comp. Psychol.,* 1928, **8**, 143–158.—Six rats are shown to have discriminated successfully between a circle and a star, of equal magnitudes and equal brightnesses. Six others discriminated between the apex-up and the apex-down positions of an equilateral triangle. This latter group also discriminated between combinations of circles and triangles whose differential features were merely the positions of the apex of the triangles. Another group of five rats discriminated vertical from horizontal combinations of circles. Five figures, six tables, and twenty references.—*H. R. Crosland* (Oregon).

178. **Frisch, I. Aus dem Leben der Bienen.** (Concerning the life of bees.) Berlin: Springer, 1927.—*W. S. Hunter* (Clark).

179. **Froloff, J. P. Bedingte Reflexe bei Fischen.** (Conditioned reflexes in fish.) *Pflüg. Arch. f. d. ges. Physiol.,* 1928, **220**, 339–349.—An inhibition of a conditioned reflex takes place when the relation between the conditioned and the unconditioned stimulus is upset, e.g., when the unconditioned stimulus is absent. Both this type of inhibition and the type involved in differentiation were demonstrated for fish (*Tinca vulgaris*). These inhibitory effects develop gradually, sometimes in waves. Conditioned reflexes of the second order, i.e., reflexes conditioned to an originally unconditioned stimulus by the use of a previously conditioned stimulus, were observed. Such reflexes have been thought limited to animals higher in the scale. Differentiation of red from green illumination by the conditioned reflex method was demonstrated, although the author admits the factor of radiant energy was not controlled. After numerous practice trials an indifferent stimulus immediately preceding an effectively conditioned stimulus is shown to exert an inhibitory effect upon the influence of the conditioned stimulus—*L. T. Spencer* (Yale).

180. **Fryxell, F. M. The former range of the bison in the Rocky Mountains.** *J. Mammalogy,* 1928, **9**, 129–139.—A summary of materials from various sources.—*H. C. Bingham* (Yale).

181. **Gabrielson, I. N. Notes on the habits and behavior of the porcupine in Oregon.** *J. Mammalogy,* 1928, **9**, 33–38.—Habitations, feeding, and migrations are discussed.—*H. C. Bingham* (Yale).

182. **Goldman, E. A. The Kaibab or white-tailed squirrel.** *J. Mammalogy,* 1928, **9**, 127–129.—Habitat, characteristics, and frequency. One plate.—*H. C. Bingham* (Yale).

183. **Goodwin, G. C. Observations on *Noctilio*.** *J. Mammalogy,* 1928, **9**, 104–113.—Brief descriptions of the behavior of this bat in eating and swimming, analysis of stomach contents, and a review of the literature.—*H. C. Bingham* (Yale).

184. **Grinnell, G. B. Mountain sheep.** *J. Mammalogy,* 1928, **9**, 1–9.—An accumulation of naturalistic observations, chiefly by hunters, on the distribution and behavior of wild sheep in western United States.—*H. C. Bingham* (Yale).

185. **Harris, W. P., Jr., & du Charme, H. Notes on set camera work with beavers in northern Michigan.** *J. Mammalogy,* 1928, **9**, 17–19.—Photographs of various animals using beaver trails include beaver, ruffled grouse, muskrat, black bear, snowshoe hare, mink, and skunk. 7 plates.—*H. C. Bingham* (Yale).

186. **Hinsche, G. Kampfreaktionen bei einheimischer Anuren.** (Fighting reactions in native anurans.) *Biol. Zentbl.*, 1928, **48**, 577–617.—Objective description of the behavior of certain anurans to "unpleasant" stimuli. The fighting reactions are only to specific situations which are already classified as adequate stimuli. This is the first description of such reactions in animals phylogenetically lower than reptiles. Interesting is the occasional "psychopathic" behavior on the basis of continual excitation and exhaustion.—*J. F. Brown* (Yale).

187. **Hubbard, W. D. Observations on the elephants of northern Rhodesia and Portuguese East Africa.** *J. Mammalogy*, 1928, **9**, 39–43.—Deals with distribution, migrations, and feeding.—*H. C. Bingham* (Yale).

188. **Keibel, F. Zur Augenentwicklung der Beuteltiere.** (The eye development of marsupials.) Berlin: Verlag d. Akademie d. Wissenschaften; W. de Gruyter & Co., in Komm., 1928. Pp. 10. M. 1.—Reprinted from *Sitzungsberichte der preussiche Akademie der Wissenschaften, physische-mathematische Klasse*, 1928, 22.—*W. S. Hunter* (Clark).

189. **Kohts, N. Recherches sur l'intelligence du chimpanzé par la méthode de "choix d'après modèle."** (Researches on the intelligence of the chimpanzee using the "choice by sample" method.) *J. de psychol.*, 1928, **25**, 255–275.—A four-year-old male chimpanzee was presented with samples of various color, form, volume, length, or thickness, and was required to choose from an indiscriminately arranged assortment of the objects in question, those which matched his sample. In one experiment, in order that cues from the experimenter might be obviated, the objects were placed in a bag, the animal being required to place his hand through a small opening and to discriminate between the objects by means of touch alone. The chimpanzee demonstrated the greatest facility in choosing colors, among which the brighter shades (white and yellow), the most saturated colors (blue and red), and the metallic and brilliant colors, gave him the least difficulty. The size of objects was discriminated a little less easily than color, but with greater facility than form. In the discriminations of length, height, thickness, surface, and volume, a difference of from 5 to 10 mm. was discriminable. In this respect the discriminations of volume surpassed all the others. Furthermore, "The chimpanzee, in his perception of magnitudes, is a 'miniaturist.' He distinguishes the same difference best among the smallest measures." The discrimination of form was easier for those objects or surfaces presenting a roundish appearance. The author thinks that this, and the facility in discriminating the brighter and more saturated colors, as well as aptness in discriminating voluminous objects, is due to the fact that these factors are predominant in the natural habitat of the chimpanzee. A number of experiments upon abstraction were also undertaken, but offered great difficulty. The chimpanzee could not discriminate any objects after a delay of 15 minutes.—*N. L. Munn* (Clark).

190. **Liggett, J. R. An experimental study of the olfactory sensitivity of the white rat.** *Genetic Psychol. Monog.*, 1928, **3**, No. 1, 1–64.—The problem of the olfactory sensitivity of the white rat was approached by two methods: (1) a repetition of Vincent's work on the effect upon learning of an odor trail in the true pathway in the maze, and (2) olfactory discriminations in the T-shaped discrimination box and in a Yerkes type discrimination box. The odor stimuli were amyl acetate, oil of sassafras, roquefort cheese, violet perfume, oil of bergamot, and carbon bisulphide. In the maze problem four groups of rats were used: (1) the control group of 26 rats, (2) odor trail Group A of 26 normal rats, (3) odor trail Group B of 15 rats which had been operated upon to render them anosmic but whose operations were not successful, and (4) the anosmic group of 16 rats. The summary of this work is given by the author as follows: "(1) No significant differences were found between the control group and the two odor trail groups. (2) The anosmics made more errors than did the other groups, while their time records were nearly the same. (3) The behavior of the different groups gave no information regarding sensitivity to the odor trail. (4) My results do not support a tonic theory of motor activity, since the anosmic rats ran more rapidly than the other groups. In the T box five rats failed to set up the discrimination between oil of anise and no odor, three of four learned to discriminate between amyl acetate and oil of anise. In the Yerkes box two rats from a group of nine learned to discriminate between oil of sassafras and violet perfume, and six learned to discriminate between amyl acetate and no odor. In all cases the discrimination was very unstable. No sex differences were found. Since cutaneous components were not ruled out, the discriminations may have been made upon that basis. Human subjects could discriminate between the stimuli used. A supplementary experiment on the location of food by olfaction showed that: (1) Cheese was located when it was buried in sawdust, so that vision and kinesthesis were excluded as cues. (2) When cork the same size as the cheese was buried in place of the food, the rat, except in a few cases, did not locate the cork. Rats which were partly anosmic made more errors in localizing the food than did the normal rats." A bibliography of 47 titles is included.—*L. M. Harden* (Clark).

191. **Linsdale, J. Mammals of a small area along the Missouri river.** *J. Mammalogy*, 1928, **9**, 140–146.—Lists the mammals of a small locality in Kansas. Includes notes on behavior and habitat.—*H. C. Bingham* (Yale).

192. **Miller, H. M., Jr. Variety of behavior of larval nematodes.** *Science*, 1928, **68**, 117–118.—The cercariae of various species of nematodes differ from one another in their behavior. In only one instance has observation failed to reveal differences in behavior between morphologically different species. The types of behavior studied include unstimulated swimming, reactions to mechanical stimulation, and reactions to light. Cercariae constitute material that

is as uniform as any which has been used for behavior studies.—*G. J. Rich* (Bellevue Hospital).

193. **Mohr, E. W. *Epimys rattus* in captivity.** *J. Mammalogy,* 1928, **9**, 113–117.—Observations and interpretations of the behavior of a single rat.—*H. C. Bingham* (Yale).

194. **Myers, J. G., & Myers, I. H. The significance of cicada song.** *Psyche,* 1928, **32**, 41–57.—We may not expect to find behavior of a high degree in the cicada associated with alimentation, but with reproduction. This is for the reason that alimentation is a very simple problem in the case of the cicada. All its life it subsists on the sap of plants and the supply it finds sufficiently abundant. "The adults are devoted wholly to Apollo and Eros," and the chief problem is concerned with the rôle of the song. Some have thought that cicadas are unable to hear, particularly Fabre. Forel thought this to be the case with most insects. However, this seems to be incorrect. A number of species regularly sing in chorus, which fact presupposes ability to hear. It would appear from experimental and morphological considerations that cicadas possess sensory equipment similar to that of man. Though sound-organs of cicadas are almost as much alike as a number of violins, the songs are quite diverse. The music depends more upon the player than upon the instrument. Observations were made in New Zealand by the writers, but they report accounts of cicada behavior from practically all over the world. The song serves the purpose of attracting the sexes to each other; the length of imaginal life of cicadas is usually short and the song facilitates mating; the future of the species depends largely upon reproductive activity in a short period of time. The writers agree with Wheeler in thinking that cicadas show signs of possessing both feelings and impulses.—*T. R. Garth* (Denver).

195. **Parker, G. H. Locomotion and righting movements in echinoderms, especially in *Echinarachnius*.** *Amer. J. Psychol.,* 1927, **39**, 167–180.—The sand-dollar, *Echinarachnius parma,* on level sand will rotate with its mouth as a center in either a clock-wise or a counter-clock-wise direction. It will move in a straight course whose direction is determined by a bodily axis through the central mouth and the marginal anus, with the anal edge posterior. It creeps forward on this axis, but not backwards. When an obstruction is reached it struggles to move forward for a time and then rotates. When oral side down, the sand-dollar will burrow into the sand so as to cover itself. It will not burrow into foul sand, and if buried in such sand will emerge. When placed on sand oral side up, it digs into the sand with its anterior edge, lifts itself until it is in a vertical position and then slowly drops oral side down. Meanwhile it buries itself. The righting movement takes place under sand in the same way but more rapidly. The burrowing of *Echinarachnius* is probably a positive geotropism, but this is apparently inhibited when the animal is covered with sand. It orients by maintaining a constant relation to the pull of gravity. The sphaeridia in the sand-dollar are concerned with its righting movements, but are not the only receptors involved.—*G. J. Rich* (Bellevue Hospital).

196. **Rabaud, E. How animals find their way about: a study of distant orientation and place-recognition.** (Trans. by I. H. Myers.) New York: Harcourt, Brace, 1928. Pp. ix + 142. $2.75.—A critical summary of experimental work on distant orientation in insects and vertebrates. "The facts based upon well-conducted experiments or observations constantly reduce the phenomena of orientation and place-recognition to processes of sensory memory, bringing into play the organs of the ordinary senses." (See I: 2172.)—*W. S. Hunter* (Clark).

197. **Richter, C. P., & Wislocki, G. B. Activity studies on castrated male and female rats with testicular grafts, in correlation with histological studies of the grafts.** *Amer. J. Physiol.,* 1928, **86**, 651–660.—Previous studies have shown that castration results in reduced activity of rats, when spontaneous operation of a rotating drum with ratchet cyclometer is taken as the means of measuring activity. In this study the testes of very young animals were transplanted to 36 somewhat older animals at the same time that their testes or ovaries were removed. Activity was greatly increased in those animals in which the grafts were functional. The animals in which the grafts were non-functioning gave no increase in activity. The grafts were more successful in males than in females. Microscopic study of the testicular grafts reveals the fact that they are not perfectly normal in any of the animals. Transplanted testes produce less increase in activity than is effected by transplantation of ovaries.—*M. J. Zigler* (Wellesley).

198. **Richter, C. P. Animal behavior and internal drives.** *Quar. Rev. Biol.,* 1927, **2**, 307–343.—A study, chiefly of the activity of the white rat, showing its periodic nature, which is fairly regular when the external conditions are as constant as possible. Recording devices were used to obtain curves to show the relation between the activity rhythms and the "drives" which "arise from underlying physiological origins." Illustrations, charts and bibliography.—*H. S. Oberly* (Pennsylvania).

199. **Rogers, F. T. The effects of artificial stimulation and of traumatism of the avian thalamus.** *Amer. J. Physiol.,* 1928, **86**, 639–650.—After describing the chief differences between the brain of the bird and that of the mammal, the author presents experimental results of his attempt to determine the functions of the thalamus in pigeons. Four to twelve weeks after removing the cerebral hemispheres anterior to the thalamus, electrical, thermal and traumatic stimuli were applied to different parts of the thalamus. The responses secured by such stimulation are grouped under the two headings—somatic muscular and visceral.—*M. J. Zigler* (Wellesley).

200. **Salvesen, S. The beaver in Norway.** *J. Mammalogy,* 1928, **9**, 99–104.—A naturalistic report. One plate.—*H. C. Bingham* (Yale).

201. **Samojloff, A., & Kisseleff, M. Die Rumpfdrehung bei Bewegung der Extremitäten der decerebrierten Katze.** (Twisting of the trunk upon

movement of the extremities of the decerebrate cat.) *Pflüg. Arch. f. d. ges. Physiol.*, 1928, **220**, 424–429.—Passive stretching of the knee extensor by bending the knee of the decerebrate cat produces, in addition to the stretching of the other knee, a turning of the upper part of the body to the opposite side, as well as extension of the ipsilateral and flexion of the contralateral fore leg.—*L. T. Spencer* (Yale).

202. **Schmid, B. Sichtbarmachung tierischer Laute.** (Visible recording of animal sounds.) *Biol. Zentbl.*, 1928, **48**, 513–521.—Oscillographic registration of the sounds made by dogs, cats, geese, etc. The animals are capable of both vowels and consonants. The author shows phonographic records to be highly inaccurate and subject to distinct sources of error.—*J. F. Brown* (Yale).

203. **Selle, R. M.** ***Microtus californicus* in captivity.** *J. Mammalogy*, 1928, **9**, 93–98.—The meadow mouse was kept successfully in captivity on a diet that is reported with records of weight. Five references are appended.—*H. C. Bingham* (Yale).

204. **Shirley, M. Studies in activity. II. Activity rhythms; age and activity; activity after rest.** *J. Comp. Psychol.*, 1928, **8**, 159–186.—Under conditions of constant food and lighting, the daily activity cycle of the rat is polyphasic, greatest activity being shown just prior to the feeding hour. A nocturnal increase in activity, even when the animal has not been affected by diurnal heat and light changes, is suggested. 20% of the entire day's work is shown in the one hour preceding feeding. One hour's exercise, in the activity cage, furnishes as fair a picture of the relative performance of the rat as does continuous activity during the day. Age affects activity in several particulars. Rest periods of 1 to 2 days increase activity by 25%, but longer periods may impair it, the more active rats being benefited by the shorter periods of rest more than the less active individuals. The cumulative effect of rest is to impair activity. Six graphs, eight tables, and ten references.—*H. R. Crosland* (Oregon).

205. **Shirley, M. Studies in activity. IV. The relation of activity to maze learning and to brain weight.** *J. Comp. Psychol.*, 1928, **8**, 187–195.—Maze-running proficiency, in a "fairly reliable" maze "as mazes go," is shown to be, for rats, only slightly related to activity. Both these variables are unrelated to brain weight. Four tables, one figure, and five references.—*H. R. Crosland* (Oregon).

206. **Shohl, A. T., & Bing, F. C. Neuro-muscular response of rats to galvanic stimuli.** *Amer. J. Physiol.*, 1928, **86**, 628–632.—This is a study of the sensitivity of the white rat to galvanic currents. It undertakes to determine, in particular, the threshold stimulus for muscular reaction to galvanic stimulation. The influence of age, sex, weight, diet, anesthesia and death upon irritability to galvanic currents is determined. Young rats require a stronger stimulus than older ones for muscular reaction to this type of stimulation. Deficiency of vitamins has no influence upon sensitivity to galvanic currents.—*M. J. Zigler* (Wellesley).

207. **Tinklepaugh, O. L. An experimental study of representative factors in monkeys.** *J. Comp. Psychol.*, 1928, **8**, 197–236.—By employing on two monkeys and two twin boys the two new methods of placing food or other reward in a container before the eyes of the subject and placing the container behind the screen of a two-alternative problem contrivance, and of substituting one container for the other or one reward for another without the subject's knowledge, an effort was made to discover the presence of representative factors (ideated cues) in the subject effective during long delays between stimulus and freedom for approach to the reward. Monkeys can choose the food-bearing container by means of differential sensory cues and by spatial cues. Right or left (from the animal) positions and the relative surroundings of the container served as spatial cues. The two monkeys made successful choices in 80% of all trials after various delays from a few seconds up to twenty hours. Their responses, even without overt bodily orientation or where orientation was impossible, were frequently correct. Glancing, during the period of delay, just prior to an overt response, from the position of one container to that of the other, suggested the reinstatement of the cue as a sequel to the disorientation which had previously been effected. "Disappointment," hesitation, and searching behavior, of the monkeys as well as of the boys, upon the discovery of substituted food or substituted container, suggested the presence of representative factors which symbolized the qualitative aspects of the reward. Similarly, evidence was observed suggesting the representation of the quantitative aspects of the reward. Four figures, one plate, five tables, and eighteen references.—*H. R. Crosland* (Oregon).

208. **Warden, C. J., & Warner, L. H. The sensory capacities and intelligence of dogs, with a report on the ability of the noted dog "Fellow" to respond to verbal stimuli.** *Quar. Rev. Biol.*, 1928, **3**, 1–28.—An account of the sensory capacities of dogs, indicating that the average dog is more sensitive to odors than is man, and probably less sensitive to sounds; vision for still objects is decidedly inferior to the ability to respond to moving objects. In the laboratory tests the dog seems to be inferior to the raccoon, monkey and ape, but superior to the cat. The second part of the paper is a report of the tests made on the German shepherd dog "Fellow," a 4- to 5-year-old male. The dog was brought to the investigators by the owner because it seemed that the dog understood or responded to some 400 words. Tests were somewhat limited, due to the fact that it was a one-man dog, but the owner is reported as cooperating throughout the tests. Tests of the following nature were given: (1) command performance with no special orientation to object or position; (2) specific orientation to object or position; (3) retrieving objects test. The writers state that "there seems to be no doubt that scores of associations between verbal stimuli and definite responses have been fixed" as a result of the training of the owner. Bibliography.—*H. S. Oberly* (Pennsylvania).

209. **Wight, H. M. Food habits of Townsend's mole, *Scapanus townsendii* (Bachman).** *J. Mammalogy,* 1928, **9**, 19–23.—Includes studies of stomach contents of moles in natural habitat and feeding experiments with moles in captivity. Twelve references are appended.—*H. C. Bingham* (Yale).

210. **Wirth, W. Untersuchungen über Reizschwellenwerte von Geruchsstoffen bei Insecten.** (Investigations on the stimulus threshold value for odorous substances in insects.) *Biol. Zentbl.,* 1928, **48**, 567.—A new apparatus for determining the threshold value of odorous substance in insects is described in detail. Values for benzine and ethyl alcohol in the wasp are given.—*J. F. Brown* (Yale).

211. **Yerkes, R. M. A program of anthropoid research.** *Amer J. Psychol.,* 1927, **39**, 181–199.—Anthropoid apes should be studied because of their greater availability for problems for which human subjects cannot be utilized, their controllability, their psycho-biological simplicity, and their resemblance to man. The problems to be studied include the fields of: action system; receptivity and sensibility; expressivity and affectivity; temporal relation of psycho-biological phenomena; perceptions, configurations, coordinations; mnemonic processes; ideation, insight, thought generalization; motivation; adaptivity and education; language and symbolism; norms and differences; social relations; and conduct and morality. For the furtherance of the program investigations should be carried out in the field or natural habitat, in the breeding and observation station, and in the special laboratory.—*G. J. Rich* (Bellevue Hospital).

212. **Yerkes, R. M., & Yerkes, D. N. Concerning memory in the chimpanzee.** *J. Comp. Psychol.,* 1928, **8**, 237–271.—With three objectives, namely (1) to observe the character of the delayed response in a controlled complex situation, (2) to determine the temporal limits of delay (memory span), and (3) to discover whether or not the delayed response is dependent upon merely one sensory factor, viz., color, in a varying situation, an experiment was conducted on four immature West African chimpanzees aged from four to seven and one-half years. A duplicate of the author's Florida gorilla apparatus was used. The animals, after a delay of three hours, can immediately and with ease gain access to the food box or the place where food has been placed; this is effected through position habits or spatial cues. When, however, position was made variable and the color of the food box constant, the animals exhibited much greater difficulty, the maximum period of delay being reduced to approximately 30 minutes. In the latter case their behavior became characterized by observational scrutiny, comparison, frequent recognition, hesitation, delay, occasional vacillation, disappointment, incredulity, mystification, resentment, anger, depression, and sometimes refusal to choose. Supplementary experiments, involving the chimpanzee's memory for persons and his finding buried food, indicate a memory carry-over for a period of 10 months in the former and 96 hours in the latter. The animals did not fall into the same rank order for the three experiments and great individual differences characterized the fixed-color, variable-position experiment. The work is being continued. One figure, three tables, and six references.—*H. R. Crosland* (Oregon).

[See also abstracts 122, 142, 144, 169, 233, 243.]

EVOLUTION AND HEREDITY

213. **Baldwin, B. T. Heredity and environment—or capacity and training.** *J. Educ. Psychol.,* 1928, **19**, 405–409.—The psychological studies need to bring to their aid significant contributions from the other fields of genetics and biology, for these latter have shown the tremendous power of the environment to change the rate and direction of growth. Even the chronological age as an indication of maturity is being discarded by some investigators. It seems clear that the background, local traditions, etc., exert a moulding influence on the minds of children. —*A. M. Jordan* (North Carolina).

214. **Bennett, A. C. Complete color blindness in a woman.** *Amer. J. Ophthal.,* 1928, **11**.—*W. S. Hunter* (Clark).

215. **Gregory, W. K. How near is the relationship of man to the chimpanzee-gorilla stock?** *Quar. Rev. Biol.,* 1927, **2**, 549–560.—A presentation of similarities between man and anthropoids in regard to general structure, hands, feet, etc. A tentative phylogeny of the primates is offered. Illustrations and charts.—*H. S. Oberly* (Pennsylvania).

216. **Gun, W. T. J. The kin of genius.** *Eug. Rev.,* 1928, **20**, 82–88.—The study is concerned with the relatives of 200 representative English men and women selected from the Dictionary of National Biography. Over two-thirds of the 200 were found to have relatives in the D. N. B. Over three-quarters of the Leaders of Action have had such relatives, nearly three-quarters of the Leaders of Thought, and well over one-half of the Leaders of Art. One-half of the entire 200 have had predecessors in the D. N. B. The results of Galton and others are confirmed in finding the number of eminent relatives greater with closer degrees of relationship.—*B. S. Burks* (Stanford).

217. **Huntington, E., & Whitney, L. Builders of America.** New York: Morrow, 1927. Pp. xiv + 368.—Drawing their data from the records of Harvard and Yale graduates and from *Who's Who in America,* the authors present the standpoint of the eugenist that the race is dying out at the top. They believe that when the members of the superior classes adequately realize this, they will take the necessary steps to combat it. The "builders" have a marriage rate about the same as that of the general population, and a birth rate for completed families of 2.8. They come largely from other "builders." The religious denominations which contribute most largely to fundamentalist crusades are roughly those which contribute least to the superior groups here considered. There is evidence that among the college-bred, the most successful have the largest families. There is a discussion on the relationship between the labor

problem and the desired decrease in the proportion of the stupid.—*R. R. Willoughby* (Clark).

218. **Judd, C. H. Intelligence as method of adaptation.** *J. Educ. Psychol.*, 1928, **19**, 397–404.—Discusses the meaning of the findings of various experiments of the Yearbook. Concludes that language, methods of study, social intelligence, and capacity to generalize constitute inheritance as much as the strictly physical characteristics.—*A. M. Jordan* (North Carolina).

219. **Kramer, E., & Lauterbach, C. E. Resemblance in the handwriting of twins and siblings.** *J. Educ. Res.*, 1928, **18**, 149–152.—The data considered were from 205 pairs of twins in the schools of Wisconsin and 101 pairs of siblings in the schools of Montana. The Kansas City Scale for Measuring Handwriting, Missouri Edition, was used as the basis of comparison. The conclusions are that twins show greater handwriting resemblances than siblings; like-sex twins show greater resemblances than unlike-sex twins; resemblances in older twins are no greater than in younger twins.—*S. W. Fernberger* (Pennsylvania).

220. **Leven, —. Die Mutter in der Erbbiologie grosser Männer.** (The mother in the biology of heredity of great men.) *Dtsch. med. Woch.*, 1928, 54.—*W. S. Hunter* (Clark).

221. **Milligan, H. J. Infant welfare and the health of school children.** *Eug. Rev.*, 1928, **20**, 95–97.—As evidence for the belief that the achievements of the infant welfare movement have not resulted in the preservation of the unfit, the author cites data upon the height and weight of children in an English district. From 1921 to 1927, he shows that "the children of the more recent years tend to be the superiors of their predecessors of earlier years," though the rate of infant mortality during the years that these children were born was steadily decreasing.—*B. S. Burks* (Stanford).

222. **Owen, F. V. Calculating linkage intensities by product moment correlation.** *Genetics*, 1928, 13, 80–110.—A method has been suggested for calculating linkage intensities by means of a product moment coefficient of correlation. The coefficient, *r*, may be readily applied to complex relationships as well as to simple cases of back-crossing. Formulae for the most general cases are given, and tables for theoretical distributions are included in the appendix. The author points out that the methods presuppose clear-cut Mendelian segregation, and that estimates of linkage intensities become inaccurate as classifications become increasingly arbitrary.—*B. S. Burks* (Stanford).

223. **Pearl, R. The growth of populations.** *Quar. Rev. Biol.*, 1927, **2**, 532–548.—The factors involved in the growth of populations are (1) natality, (2) mortality and (3) migration. Growth follows the "logistic" curve. A report of "experimental investigation of populations of *Drosophila melanogaster* under controlled conditions." Charts and bibliography.—*H. S. Oberly* (Pennsylvania).

224. **Popenoe, P. Eugenic sterilization in California. VI. Marriage rates of the psychotic.** *J. Nerv. & Ment. Dis.*, 1928, **68**, 17–27.—A study of the differences in the marriage rates of the various psychoses shows that male psychotics marry freely at all ages while the female marriage rates remain almost constant after the age of thirty. The marriage rate of sterilized patients with dementia praecox is lower than that of manic-depressives at all ages. Graphs and tables.—*R. A. Young* (Boston Psychopathic Hospital).

225. **Terman, L. M. The influence of nature and nurture upon intelligence scores: An evaluation of the evidence in Part I of the 1928 Yearbook of the National Society for the Study of Education.** *J. Educ. Psychol.*, 1928, **19**, 362–373.—Evaluates the experimental and statistical findings of the 27th Yearbook of the National Society for the Study of Education. Finds evidence from several investigators that nurture is able to produce but small changes in the I Q. Considers the Chicago study of foster children and finds it considerably different from the Standford study of the same phenomena. Attributes the larger influence of environment in the Chicago investigation to spurious correlation, possibly attributable to the selective placement of foster children in families.—*A. M. Jordan* (North Carolina).

226. **Whipple, G. M. Editorial impression of the contribution to knowledge of the Twenty-seventh Yearbook.** *J. Educ. Psychol.*, 1928, **19**, 289–396.—Summarizes briefly the general trend of the Yearbook exclusive of the Stanford and Chicago studies of foster children.—*A. M. Jordan* (North Carolina).

227. **White, F. W. Natural and social selection.** *Eug. Rev.*, 1928, **20**, 98–104.—The author believes that mortality is more closely related to natural endowment than to occupational environment, citing the fact that in the coal mining industry "mortality falls much more lightly upon those whose work is hardest and whose environment is least favorable," since these men are those with the best natural inheritance. A survey is given of the incidence of various diseases and afflictions during recent and less recent years, in relation to the declining rate of infant mortality. Deaths from cancer are increasing; tuberculosis and influenza continue to menace the adult population. The number of insane, mental deficients, and paupers being supported by the state is very large. The incidence of physical defects is high among children of school age.—*B. S. Burks* (Stanford).

228. **Wingfield, A. H., & Sandiford, P. Twins and orphans.** *J. Educ. Psychol.*, 1928, **19**, 410–423.—102 pairs of unselected twins were tested with National Intelligence Test, Scale A, Form 1, Multimental Scale of McCall, the Stanford Achievement Test, British Columbia Test in the Fundamentals of Arithmetic, and the Morrison-McCall Spelling Scale. Otis's formula using standard deviations was employed for computing the coefficients of correlation. In general intelligence all twins correlated .76, unlike-sex pairs .62, like-sex pairs .83, fraternal pairs .72 and identical pairs .91. When age was made constant the coefficients were reduced from one to three points. The results approximated very closely

those of other investigators. As a whole there was little difference in the sizes of coefficients whether young or old twins were considered. Very little difference appeared between the coefficients for the Stanford Achievement and the National Intelligence Tests. The median I Q of twins was 96.8. The author in summary holds that the results so far obtained show that physically identical twins correlate .90; like-sex twins .82; fraternal twins .70; and unlike-sex twins .59.—*A. M. Jordan* (North Carolina).

229. **Young, J. W. General Sherman's Puritan heritage.** *Eug. News,* 1928, **13**, 106–109.—Information is given regarding the accomplishments and characteristics of a large number of General Sherman's progenitors.—*B. S. Burks* (Stanford).

[See also abstracts 50, 159, 166, 363, 499, 500.]

SPECIAL MENTAL CONDITIONS

230. **Allen, E. A. Temperament tests.** *Brit. J. Med. Psychol.,* 1927, **7**, 392–446.—This is a doctor's dissertation approved by the University of London. The tests given were a word reaction test similar to that of H. T. Moore, and the Pressey X – O test. In addition, a long questionnaire and rankings from friends on a prepared form were also used. These gave five measures of various traits of character and temperament, that from the reaction time, the emotion value, the questionnaire, and one from each of two friends. Each of these measures was ranked and rank correlations for each individual found. The same formula was used in the individual cases in making the table of reliability. Computations for other tabular data presented were obtained by the product moment method, and the coefficients included are Bravais-Pearson coefficients. 64 subjects were used. Mention can be made here of only a few of the conclusions: (1) The reliability of the tests was not high. (2) The tests confirm Moore's hypothesis that quickened reaction time reveals the traits of strongest conative tendency and the points of strongest conscious interest. (3) The tests do not differentiate individuals, and cannot be recommended as objective tests for the strength of instinctive traits. (4) Analysis shows a predominance in males of sex and positive self-feeling; in females, of tenderness and disgust. (5) In the judgment of friends, positive self-feeling seemed to be the easiest to judge. (6) The evidence points to a common emotional factor, confirming Burt's hypothesis of a general emotivity.—*N. Fenton* (California Bureau of Juvenile Research).

231. **Baynes, H. G. Freud versus Jung.** *Brit. J. Med. Psychol.,* 1928, **8**, 14–43.—Theoretical and critical account pointing out the adequacies of Jungian concepts and the inadequacies of Freudian interpretation. A dream analysis is used for illustration.—*N. Fenton* (California Bureau of Juvenile Research).

232. **Burrow, T. Biological foundations and mental methods.** *Brit. J. Med. Psychol.,* 1928, **8**, 49–63.—This paper begins with a brief discussion of the wide prevalence of mental disorders. It then continues at some length to enlarge upon the idea "that mental disorders are infectious, that these conditions are transmissible from one individual to another and from generation to generation, and that the soil for their germination and spread is, like that of somatic infections, the social medium."—*N. Fenton* (California Bureau of Juvenile Research).

233. **Chase, R. E. The effect of nicotine and caffeine on the growth of chickens.** *Amer. J. Physiol.,* 1928, **85**, 527–530.—Different groups of thirty-six hour old chicks were fed nicotine and caffeine for ninety days in order to note any alterations in the rate of growth. Control groups were fed water by the same mode of administration. Large doses of nicotine failed to show any harmful effect upon growth, although in a few instances the initial dose threw the chick into a fatal spasm. Caffeine, however, produced striking retardation of growth, inactivity and slight loss of appetite. Caffeine did not produce the initial toxic effect which nicotine sometimes occasioned.—*M. J. Zigler* (Wellesley).

234. **Chassell, J. O. The experience variables; a study of the variable factors in experience contributing to the formation of personality.** Rochester, N. Y.: Author, 1928. Monograph 18 pages, record 21. $0.75; record alone, $0.25; 10 copies, $0.15 each.—The author attempted to apply the self-rating method to a relatively exact characterization of the primary attitudes making up personality and to the determination of the factors in experience which might play a causative rôle in their genesis. It was also desired to test the resulting instrument for statistical reliability and to apply the results found to the evaluation of some contested hypothesis. The traits were determined from conversations with 100 students on their problems, and 20 more records figure in the final evaluation. The reliability coefficients (C) found were about .70. The theory tested was that of Hinkle on inborn types; Yule Q's indicated that there is a rather strong association between the subject's personality attitudes as seen by himself and his recollection of related experience factors, thus tending to deny the Hinkle theory. The viewpoint taken throughout gives weight to the findings and hypothesis of all psychological schools.—*R. R. Willoughby* (Clark).

235. **Courbon, P. Sur la psychologie de la viellesse.** (The psychology of old age.) *J. de psychol.,* 1927, **24**, 455–463.—A discussion of the psychophysiological aspects of old age. The study of a female octogenarian is presented and various generalizations drawn from it. A distinction is made between normal and pathological senility, the mental pathology of old age presenting mania, melancholy, confusion, delirium, and such syndromes as presbyophrenia, prejudicial delirium, and Alzheimer's syndrome. Normal senility presents a nondemential impairment of the psychic processes particularly characterized by a restriction of general affectivity, of intellectual activity, and especially of memory. Several characteristic stages are discussed.—*N. L. Munn* (Clark).

236. **Dunlap, K. A project for investigating the facial signs of personality.** *Amer. J. Psychol.,* 1927,

39, 158–161.—What a man has done in the past establishes some probability that he will act in the same way in the future. The lines of the face depend upon the action of the facial muscles, and these may be modified by habitual emotional responses. It is planned to study the relationship of facial lines to personality type.—*G. J. Rich* (Bellevue Hospital).

237. **Ferenczi, S. Die Elastizität der psychoanalytischen Technik.** (Elasticity of the psychoanalytic technique.) *Int. Zsch. f. Psychoanal.*, 1928, **14**, 197–209.—Ferenczi's chief purpose is to make clear some of the implications in the tact needed by the analyst, and so to rob the term "tact" of its mystical character. One of its essential conditions is that the analyst shall have himself been through an analysis which has been brought to an end. The technical "activity" is still further defined and delimited. The unconscious super-ego must be replaced by a preconscious one, which will cause no such compulsion to slavish obedience as was given to the unconscious parental imagines. The technical elasticity implies a revision of the material and a reconstruction of the mechanism of symptom and character formation at every fresh advance in the analytic work. The analyst must control his oscillations between empathy, self-observation and judgment; he must be sparing with interpretions, avoiding all that is superfluous. In his day's work he cannot abandon himself at all to a free enjoyment of his narcissim and egoism in reality; and in fantasy only for short moments. For this almost unequalled burden a special hygiene for analysts may be needed, in addition to the experience of having been analyzed.—*C. Moxon* (San Francisco).

238. **Freud, A. Zur Theorie der Kinderanalyse.** (A contribution to the theory of child analysis.) *Int. Zsch. f. Psychoanal.*, 1928, **14**, 153–162.—By means of examples A. Freud indicates the most important difference between the analysis of adults and children. As child analysis must be classed all those cases in which the super-ego has not yet attained real independence; whereas in the analysis of adults the super-ego continuity resists all external efforts for its modification until its commands and prohibitions have been referred back to their origin in childish identifications. Hence a change of personal environment may cause the disappearance of children's symptoms to an extent that would be impossible with adult neurotics. Consequently in the analysis of children, besides the work of historical dissection of the super-ego (so far as it is independent), there is the educational influence upon the child's relationship to elders, the revision of former demands, and the creation of new impressions. The children's analyst should therefore have a theoretical and practical knowledge of pedagogy.—*C. Moxon* (San Francisco).

239. **Garnett, A. C. Instinct and personality.** New York: Dodd, Mead, 1928. Pp. 218. $3.00.—This book, written especially for the general educated reader, is concerned chiefly with theories of instinct and the unconscious. The author starts with the thesis that conation, not cognition, is to regarded as the essential mental fact. In nine chapters he discusses the urges of life, the nature of instinct, expectation, the sources of energy, the native human motives, the ideals, the fact of unconscious process, the explanation of the unconscious, and body and mind. Instinct is defined as "an innate structure which, by determining the meaning of a certain group of presentations to include the expectation of certain purposive behavior, directs the attention of the individual to those presentations and impels it to a certain purposive line of activity with regard to the object presented." Instincts are classified with reference to ends. The instinctive action itself is pursued for its own sake. The end, when achieved, is enjoyed in and for itself. In the light of this criterion the author restates each of McDougall's instincts as native human motives. The theories of the unconscious set forth by Freud and Morton Prince are expounded and the conclusion is reached that all unconscious processes are purely physiological continuations of neural processes initiated by expectant attention and then dissociated. All the processes of both body and mind are explained by one principle, the horme or urge, which is not merely physical energy, but consciousness affecting the activities of the organism. The direction of physical energy by consciousness is effected through concentration of attention on an end. It is this end-conconsciousness of horme that is the motive power, of progress.—*F. O. Smith* (Montana).

240. **Gemelli, A. Les causes psychologiques de l'intérêt des projections cinématographiques.** (Psychological causes of the interest in moving pictures.) *J. de psychol.*, 1928, **25**, 596–606.—The author believes that moving pictures make the same impression on an observer as a dream and that every attempt to synchronize them with sound, to develop stereoscopic or colored effects, and to perfect daylight projection, will only damage their popularity. These innovations, by approximating the characteristics of actual life, will destroy the illusion which makes the observer "lose his own personality" as in a dream. He finds this to be the outstanding psychological cause of interest in moving pictures.—*N. L. Munn* (Clark).

241. **Green, G. H. The terror-dream.** London: Kegan, Paul, 1927. Pp 126. 5s.—Terror-dreams, though common in childhood, are not obvious wish-fulfilments; the author believes, however, that they tend toward such, but are interrupted by waking due to the terror introduced by an associated element not relevant to the dream purpose. The middle part of the book is devoted to a theoretical consideration of the relations between instinct, emotion and action, and particularly to a theory of symbolism according to which this phenomenon arises from the generation of emotion with reference to a number of more or less similar objects during a stage in which the immaturity of the motor responses do not permit a trial which would show to which of them the emotion was appropriate. Terror-dreams of childhood sometimes become metamorphosed into recurrent dreams which express approximately the same content without the same emotion. An appendix on the execution-dream explains this species of the terror-

dream, together with the variant in which the dreamer is the sole survivor of a cosmic cataclysm, as an expression of a feeling of difference of aim between the dreamer and his society so deep that one or the other must be exterminated.—*R. R. Willoughby* (Clark).

242. **Hadley, E. E. Presidential address.** *Psychoanal. Rev.*, 1928, **15**, 384–392.—The speaker presents a brief review of the history of the Washington Psychopathological Society, followed by certain objections to the dualism between life and death instincts postulated in Freud's *Beyond the Pleasure Principle*. He feels that rest, inactivity, relaxation, Nirvana, etc., would be more fruitfully considered as one goal of the life instinct. Bibliography of 46 papers read before the Society.—*R. R. Willoughby* (Clark).

243. **Hamilton, G. V. Comparative psychology and psychopathology.** *Amer. J. Psychol.*, 1927, **39**, 200–211.—The conclusions reached by the psychoanalyst are not capable of scientific or even technological proof. They rarely rise above the level of shrewd intuitions. Freud has given no adequate criteria for the interpretation of what the subject produces. A question may be raised as to extent to which the subject's spontaneous productions are determined by his previous knowledge of psychoanalytic theory or by what is told him by the analyst. The therapeutic needs of a patient prevent the psychoanalyst from obtaining information of this type by keeping the subject naïve. In experiments with animals fundamental data might be obtained with regard to such problems as the conditions of maladaptive behavior, the means of modifying the reactive value of a situation, the adaptive value of sexual behavior, the presence of innate "incest barriers," or the development of hostility toward one parent (Oedipus complex).—*G. J. Rich* (Bellevue Hospital).

244. **Harnik, J. Die ökonomischen Beziehungen zwischen dem Schuldgefühl und dem weiblichen Narzissmus.** (The economic relations between guilt feeling and feminine narcissism.) *Int. Zsch. f. Psychoanal.*, 1928, **14**, 175–179.—The case of a narcissistic woman who reacted to analytically gained increase of vaginal sensibility by an intense feeling of personal ugliness. At the time when, as a child, the Oedipus complex was repressed, her mother appeared to her as ugly and dirty because of her indulgence in genital activity now condemned by the girl's super-ego. The only period of childhood when this woman had failed to show her regular love of her body and clothes followed her mother's discovery and punishment of the daughter's masturbation. The transformation of penis libido into a narcissistic cathexis of the body occurs in early childhood and reduces the cathexis in the woman's super-ego.—*C. Moxon* (San Francisco).

245. **Heilborn, A. The opposite sexes: a study of woman's natural and cultural history.** London: Methuen, 1927. Pp. 160. 6s.—*W. S. Hunter* (Clark).

246. **Janet, P. Les sentiments du vide.** (Feelings of emptiness.) *J. de psychol.*, 1927, **24**, 861–887.—This is part of a chapter in the second volume of *De l'Angoisse a l'Extase*, to appear soon. The sentiments of emptiness are "that considerable group of pathological sentiments which express diminution or absence of normal sentiments, that group which comprises the sentiments of religious shortcomings, of loss of intelligence, of memory, of personality, sentiments of automatism, of unreality, of death . . . etc." Janet takes the stand that "The sentiment of emptiness is a malady of action and not of sensibility or of the poorly understood consciousness." He then considers conservation of the primary action, disparity of secondary acts, and the rôle of secondary actions in sentiments. His conclusion is that "The sentiment of emptiness and especially the state of emptiness depends upon the suppression of a group of secondary acts, of a group of echoes and of harmonies which ordinarily accompany normal action, it is quite probable that the inverse phenomenon, the development of these secondary acts, must play a rôle in normal sentiments."—*N. L. Munn* (Clark).

247. **Janet, P. Les beatitudes. I.** (Ecstasies.) *Rev. Phil.*, 1928, **105**, 321–366.—In this article the author continues his discussion of perverted sentiments. Here he deals in particular with the ecstatic sentiments. These may show almost unlimited variation, but they have three characteristics in common, immobility, inner thought and the sentiment of great joy. They are found in the psychoses, in the neuroses, in dreams, and in drug addiction, and are the dominant sentiments of the mystics. Janet compares ecstasy to other elated states, showing the differences among them. He criticizes various theories, including that of the psychoanalysts, that have been brought forward as explanatory of this sentiment in its exaggerated form. One explanation, that of introversion, is considered in great detail. The theory of introversion does not sufficiently elucidate many cases. The keynote lies rather in the mode of "inner thought" of the individual. The "inner thought" of an individual in an ecstatic condition is far different from that of a depressed case of dementia praecox, although their external behavior may be similar. The article throughout is full of illustrative material.—*T. M. Abel* (Illinois).

248. **Jones, E. Psycho-analysis and the artist.** *Psyche*, 1928, **32**, 73–88.—The theme here is the relation between the psychology of the artist and psycho-analysis. The psychologist is confused at the start of his investigation of art by two conflicting views, (1) that art is pure, being concerned with form only and not with content, and (2) that it is humane, largely a matter of feeling. At this point the psychoanalyst claims that the driving force in artistic impulse is the need for expression. Esthetic feeling in reality is a variety of fore-pleasure, a getting ready for a culminating, or end-pleasure. This is found exemplified in the fore-pleasure of love-making which leads to the act of sexual union. But the artist resents such a biological basis for art. Psycho-analysis deals with the unconscious mind,

whence come the conflicts of the conscious mind. The impulse behind the artistic effect is this unconscious, biological tendency. Art seeks to transcend life; in fact, it may be regarded as in part a flight from life; but it is more than that, for it is an expression under the guise of flight. No artist is able to reach the heights of human nature who is not also able to sound the depths thereof. And while no artist gets very far unless he concentrates within himself, he must be his own severest critic, still he must express himself in "impersonal feelings." Shakespeare and Goethe have given us more information about human nature than have the psychologists, if this be taken in its widest and deepest range. —*T. R. Garth* (Denver).

249. **Katz, D. La psychologie de la faim et de l'appétit, en particulier chez l'enfant.** (The psychology of hunger and appetite, particularly in the child.) *J. de psychol.*, 1928, **25**, 165–180.—The author considers hunger and appetite as superior to all other impulses. He regrets that humans cannot be subjected to experimental situations in which the relative power of the food-seeking and sexual impulses could be determined. Experiments with animals, he claims, have undoubtedly shown food-seeking more imperious than sex, and a comparison of human beings would probably yield similar results. Hunger is of the greatest social significance and is closely associated with all social upheavals. He does not find that sex or any other impulse has caused conflagrations as outstanding as those which may be attributed to hunger. Alimentary repugnances are discussed, especially as they manifest themselves in children. These are due to social conditioning. He presents an anecdotal discussion of the hunger impulse in two children and the types of conditioning undergone during the early years of childhood.—*N. L. Munn* (Clark).

250. **Klaus, A. Besessenheit und verwandte Geisteszustände.** (Obsession and related mental conditions.) *Zentbl. f. Okkultismus*, 1928, **21**, 272–277.—*A. Römer* (Leipzig).

251. **Kupfer, A. Das Stoffwechsel-Phänomen in Konnersreuth im Lichte der Körperkonstitutionslehre Carl Huters.** (The assimilation phenomenon in Konnersreuth in the light of Carl Huter's theory of the constitution of the body.) *Okkultistische Rundschau*, 1928, **23**, 74–78.—The many-sided consideration of the Konnersreuth case is given here a supplementary treatment from the occult point of view. Huter's theory of the constitution, which discloses the development of the fundamental forms of life from the original energies of the ether, solves the problem. In case of special bodily constitutions it is possible that the human being to a certain extent draws force from his environment and thus nourishes himself.—*A. Römer* (Leipzig).

252. **Leroy, E. B. Sur quelques variétés de souvenirs faux dans le rêve.** (Some varieties of false recollections in the dream.) *J. de psychol.*, 1927, **24**, 539–549.—A discussion of two types of dream experienced by the author. He thinks that the contrary opinions and confused ideas on the subject of dreams necessitate an analysis and classification of the different fundamental types of dreams.—*N. L. Munn* (Clark).

253. **Messer, A. Die erkenntnistheoretische Grundlage der Parapsychologie und Paraphysik.** (The theory of knowledge at the basis of parapsychology and paraphysics.) *Zsch. f. Parapsychol.*, 1928, **3**, 286–296.—Even though the author is perfectly cognizant of the fact that the value of parapsychological investigations is still as much contested as it was decades ago, he makes a plea at the outset for public support for the development of parapsychological research institutions. Messer regrets the fact that the right of critical scientific investigation of occult phenomena is usually opposed because of the methods of unscientific occultism. He tries therefore to set forth the right of parapsychology from the point of view of critical realism. He believes that in spite of Kant's basic concept a dispassionate recognition of the scientific character of parapsychology is possible. He also believes that the critical realist can seriously accept the hypotheses both of animism and spiritualism. The investigator of the occult realm can derive from this critical study his intellectual justification and the ability to meet objections and prejudices with a clear presentation of the scientific value of his work.—*O. Seeling* (Berlin).

254. **Michels, R. Sexual ethics: a study of borderland questions.** (Trans. by E. and C. Paul.) London: Allen & Unwin, 1928. Pp. 312. 7s. 6d.—*W. S. Hunter* (Clark).

255. **Milt, B. Einfluss der Sterilisation durch partielle Tubenresektion auf die Menstruation und das Geschlechtsleben.** (Influence of sterilization by means of partial tube resection upon menstruation and sexual life.) *Zsch. f. d. ges Neur. u. Psychiat.*, 1928, **112**, 639–660.—Until recently it was held that sterility was the only result of the partial removal of the Fallopian tubes. Occasional observations, however, pointed to the value of a systematic study of further possible results. The author asked a number of questions of 49 women who, from various indications, were all sterilized in the same manner by means of tube resection. The women were of different ages and most of those in the present discussion had given birth to a number of children. With reference to menstruation the study shows that in more than half of the cases changes in cycle, duration and degree, as well as earlier climacteric followed the operation. Age and number of births had no uniform influence. Moreover, almost half the cases showed a distinct diminution in sexual desire, later also in pleasure in intercourse; only a few women who previously had had a fear of pregnancy experienced an increase. In addition to remorse, which is found also in women who have borne many children, still further reactive psychic results were found, while the frequently occurring lack of satisfaction on the part of the men brought with it fear for their faithfulness. Thus a disturbance of the marital relation sometimes cannot be excluded from the results of this operation.—*S. Krauss* (Heidelberg).

256. **Peter J. Fortleben nach dem Tode.** (Survival after death.) *Zsch. f. Seelenleben u. neuere Psychol.*, 1928, **32**, 58–60.—Conclusion of a series of articles. Comparisons are made between the concepts of purgatory and hell on the one hand, and the spiritualistic results on the other hand. Thus it is pointed out that the spiritualist does not yet know how the life of the departed spirits actually goes on, since the spiritualist establishes the appearance of the departed spirit only in exceptional cases.—*A. Römer* (Leipzig).

257. **Pfeifer, S. Die neurotische Dauerlust.** (The neurotic extension of pleasure.) *Int. Zsch. f. Psychoanal.*, 1928, **14**, 210–222.—By case material Pfeifer shows the neurotic tendency to enjoy erotic satisfaction, approximating to the continual union with the mother before birth. These cases indicate a special sensitiveness to the inevitable traumas, and a great inability to bear the genital tensions. Hence their womb fantasies, with a lower level of tension and with feelings of lasting erotic omnipotence, tend autoplastically to perpetuate the primary attachment. They seem to have a strong bisexual *Anlage* and castration anxiety from the Oedipus complex. Fear of catastrophe, whether of death (Ferenczi) or of severance (Stärcke and Rank) explains why the analytic removal of their feelings of erotic omnipotence is followed by a phase of strong castration anxiety. The omnipotent feeling may be shown by prolonged or repeated coitus or masturbation. To cure these cases the analyst must lift the sexuality out of the state of intrauterine satisfaction, and induce a higher threshold for stimuli and a higher level of tension.—*C. Moxon* (San Francisco).

258. **Praktikus. Psychotechnik im Examen und die Überwindung der Examenfurcht.** (The psychotechnique of examinations and the conquest of examination fears.) Pfullingen: Baum, 1927.—*W. S. Hunter* (Clark).

259. **Praktikus. Psychotechnik beim Gramen. Wie kommt man sicher durchs Gramen, und wie überwindet man den Furcht davor?** (The psychotechnique of melancholy. How may melancholy be withstood, and how may the fear of it be conquered?) Pfullingen: Baum, 1927.—*W. S. Hunter* (Clark).

260. **Quercy, P. Auto-observation d'hallucinations visuelles.** (Self-observation of visual hallucinations.) *J. de psychol.*, 1927, **24**, 520–537.—After discussing the classical types of hallucination, and the hallucinatory effects of alcohol, peyote, hashish, etc., Quercy describes and discusses some visual hallucinations experienced by him during an attack of influenza. He experienced hallucinations of Persian tapestry, of strange and surprising objects, of familiar objects, and of living creatures. The last group of hallucinations were only occasionally experienced. There were no hallucinations involving scenery. He paid particular attention to eye movements and their effect upon the hallucination. In every case the hallucinatory image was displaced with a movement of the eyes. The author thinks, however, that whether the images follow the eyes or not has no necessary bearing upon a retinal, central, or purely mental theory of hallucinations.—*N. L. Munn* (Clark).

261. **Reich, W. Über Charakteranalyse.** (Character analysis.) *Int. Zsch. f. Psychoanal.*, 1928, **14**, 180–196.—This term is proposed in place of the usual term "resistance analysis," because a particular group of resistances have to be distinguished as character resistances. From a symptom neurosis a character neurosis is chiefly distinguished by lack of insight into the morbid condition, and by more complete and believable rationalizations. The technical approach to character analysis is by first attending to the actual behavior; the infantile material is not always necessary for this purpose. The character traits must be isolated and emphasized by a selection of material. When resistances are attacked from the ego side (rather than from the id side) there is no danger of overlooking the skilfully hidden hate. The character analysis is a more difficult and painful experience, from which the beginner should abstain. The neurotic character must be altered just in so far as it forms the basis for symptoms and in so far as it conditions disturbances in the capacity for work and sexual enjoyment.—*C. Moxon* (San Francisco).

262. **Rickman, J. On some of the standpoints of Freud and Jung.** *Brit. J. Med. Psychol.*, 1928, **8**, 44–48.—Freud has no viewpoint peculiar to himself, but works on that shared by scientists generally —namely, determinism. Jung's viewpoint as interpreted by Bayne suggests, on the contrary, a metaphysical or spiritualistic basis. Rickman's two comments are (1) the Jungian method is depreciative not of human personality in general but of the particular personality under treatment; (2) the Freudian method is more precise than the Jungian, relating its transference to past experience, not to future experience. "Freud is not infallible, but without work by his method it will not be possible to demonstrate that Jung is right."—*N. Fenton* (California Bureau of Juvenile Research).

263. **Sachs, H. Über einen Antrieb bei der Bildung des weiblichen Über-Ichs.** (A stimulus in the formation of the feminine super-ego.) *Int. Zsch. f. Psychoanal.*, 1928, **14**, 163–174.—A specially important factor in the woman's character development is the typical feminine phenomenon of persistent and powerful oral wishes directed in childhood to the father. The weaning trauma lies at the root of this regressive phenomena, which represents a last attempt to keep the father fixation at the Oedipus phase, after the frustration of the little girl's genital wishes. Sachs' view of the matter differs from Rank's view, which makes the relation between oral erotism and genitality of equal importance for both sexes. The man's super-ego originates from fear at the threatened loss of a highly valued part of the body; the woman's super-ego is attained only when the necessary renunciation of the acquisition of this part leads to a lasting demand for resignation.—*C. Moxon* (San Francisco).

264. **Schmalhausen, S. D. Why we misbehave.** New York: Macaulay, 1928. Pp. 313. $3.00.—A

collection of essays on sex and present civilization, mostly reprinted from various journals. The author looks with confidence to the new psychiatry to guide current tendencies to solve sex problems in the direction of the release of repressions that are merely traditional, and of the revivification of sexual relations through a spirit of play, freedom and beauty; contraception occupies a central position in the new orientation making this possible. The author's psycho-sexual inventory is presented in full, with some case studies resulting from its application to children and college students.—*R. R. Willoughby* (Clark).

265. **Starobinski, A. Une nouvelle conception du génie et du talent.** (A new conception of genius and talent.) *Ann. méd.-psychol.*, 1927, **85**, 229–233.—According to Segaline, genius is composed of two fundamental elements—the cumulative and the psychopathic. The former is the result of the nervous and the psychic energy transmitted from one generation to another. Thus when one speaks of intellect, he means that potential energy which is released by the stimulation of the external world. In the case of a genius, this energy is particularly "elevated," his creative activity appearing at an early age. For the manifestation of this energy, psychopathic elements are necessary. "Psychopathic elements always exist in the lines of the ancestors of the parents of the genius. . . . The psychopathic factor, which is a factor of dissociation, gives to genius the possibility of setting free the accumulated psychic complexes." Another element favorable to the creation of genius is that of intermarriage, where racial crossings are provocative of the development of great men. As for the eugenic practice of the elimination of the unfit, especially of psychopathic individuals, Segaline points out that this ultimate destruction of the psychopathic element would be disastrous to the creation of men of genius.—*P. A. Pooler* (Boston, Mass.).

266. **Stern, E. Zum Problem des Zufalls.** (Concerning the problem of chance.) *Zsch. f. Parapsychol.*, 1928, **3**, 217–223.—The book aims to correct the generally accepted impression concerning the essence of chance. According to the author chance is not an event which takes place without definite determination, for there can be no event without a cause. He believes that chance is the occurrence of an event whose determinants we do not know, or in case we do know them which we cannot control. The analysis of chance events leads not only to the disclosure of the connections but often also to a control of the events.—*O. Seeling* (Berlin).

267. **Stern, W. La psychologie de la personalité et la méthode des tests.** (The psychology of personality and the test method.) *J. de psychol.*, 1928, **25**, 5–18.—The study of personality, or "personalistic," has two fundamental postulates, viz., that "the person is a unity" and that "it has depth." The separation of the individual into a physical and a psychical part is an abstraction which, though necessitated by scientific problems, is a grave obstacle to the study of personality. From the viewpoint of personality these are inseparable. "*They are psycho-physically neutrals.*" Hence the necessity for a "scientific study of the undivided man." This would bring about a considerable change of attitude towards psychotechnics and especially elementary tests and measurements. There has been a dogma in psychology that "the more we decompose a human action into its elementary functions, the more we study them in a detailed and isolated state, the better known will be the real structure of this action." But, says Stern, in thus isolating the elementary functions we are separating ourselves from personality, which comprises a harmonic functioning of all the aspects which have been isolated. The isolated functions are manifested in an entirely different manner when studied in the total organism. A weak function may be strengthened by others, a quick reaction under laboratory conditions may be a slow one when the person's behavior is not canalized by the experimental situation. The use of professional and trade tests under natural conditions, together with elementary tests, is advocated. "The result of the whole series of tests is not a juxtaposition of elements, but *a system of cross sections in the active personality*, which differ only in position and center." Personality has a peculiar dimension only recently discovered. "Personal life does not extend merely on the surface . . . but it possesses a volume, a vertical structure which is composed of layers situated at different depths." Here the author mentions much of the psychoanalytical literature, referring particularly to that of Adler and Freud. Depth psychology demands personalistic interpretation. This may be helped by a scientific study of expression and the like. The author stresses intuition as being necessary in the work of personalistic interpretation. The science of personalistics will, the author believes, be invaluable to those who select and train individuals for trades and professions.—*N. L. Munn* (Clark).

268. **Swift, E. M., & Boyd, C. S. The Pullman porter looks at life.** *Psychoanal. Rev.*, 1928, **15**, 393–416.—The authors are physicians attached to the hospital of the Howard University Medical School, and were for a number of summers Pullman porters. They here recount and interpret from the psychiatric viewpoint numerous experiences illustrating the distribution of psychopathological traits in a cross-section of the general population.—*R. R. Willoughby* (Clark).

269. **Vance, J. G. A mirror of personality.** London: Williams & Norgate, 1927. Pp. 157. 5s.—*W. S. Hunter* (Clark).

270. **Vinchon, J. Essai d'interprétation des phénomènes de l'incubat.** (An interpretation of the phenomena of the incubus dream.) *J. de psychol.*, 1927, **24**, 550–556.—The incubus dream differs from those which psychoanalysts have studied from the symbolic point of view. Rather it is an amplification and embellishing of internal sensations. As a result of his analysis of several types of incubus he has come to the conclusion that the phenomenon can be explained in the following manner: "Suffocation accompanied by anxiety is due at the time to the mechanical compression of the thoracic organs by

the air pocket of the air swallower and to irritation of the pneumogastric and vagus nerve centers, of which the experimental excitation . . . provokes a spasm of the bronchiae and a vaso-dilation which tends to interdict the movement of the air. Concomitant sexual erethism is due to the extension of this nervous excitation to the whole parasympathetic or autonomic system, of which the pneumogastric as well as the sacral nerves form a part. Here the intervention of the psychism appears to be quite a secondary fact; the Freudian repression only throws light upon the more or less picturesque details; it by no means clarifies the mechanism of the phenomena. If it were otherwise, the dream of incubus, instead of coming at almost constant times—those of aerophagic dreams—would be reproduced no matter what hour of the night. But the patients themselves inform us that their other nightmares reproduce quite different pictures."—*N. L. Munn* (Clark).

271. **von Foerster, J. F. Verfahren und Möglichkeiten der Schriftbeurteilung.** (Methods and possibilities of judging handwriting.) *Indus. Psychotechn.*, 1927, **4**, 129–147.—Methods used in judging character traits from handwriting are briefly described and illustrated. Various procedures for checking the judgments are mentioned and some exploratory experiments are reported. Low positive correlations were found among the judgments by different judges, and between their judgments and objective test scores of the students judged. In other experiments some agreement appeared between handwriting judgments and self-estimates by those judged, judgments of sex from handwriting, etc.—*A. W. Kornhauser* (Chicago).

272. **von Klinckowstroem, C. Mediumismus und experimentelle Psychologie.** (Mediumship and experimental psychology.) *Monist. Monatsh.*, 1928, **13**, 114–117.—Prominent in this paper is the consideration of Schulte's experiments concerning the determination of the exactness of the observer in occult seances. In one case the deception was so gross that the investigator failed to notice that a fairly strong red light was switched on and off about 20 times. Schulte wishes to call the attention of all those who busy themselves with mediumship to the great responsibility concerning method.—*A Römer* (Leipzig).

273. **Whitehead, G. An easy outline of psychoanalysis.** London: Jenkins, 1927. Pp. 120. 2s. 6d. —*W. S. Hunter* (Clark).

274. **Winterberg, R. Der Insterburger Hellseherprozess.** (The trial of the Insterburg medium.) *Zsch. f. Parapsychol.*, 1928, **3**, 415–426.—The author, as former counsel of Frau Günther-Geffers, who was accused of fraud by mind-reading, reports on this long trial which has supplied valuable material for parapsychology. His book is divided into the following sections: description of the trial, the personality of the accused, the witnesses, the experts, the trance, chiromancy and prophecies, the two experiments in the court-room, the expert testimony, the prosecution, the scientific conclusion and the utility of criminal telepathy. Winterberg warns us against collaborating with expressly negativistic groups and names as such those of Hellwig, Moll and Dessoir. He makes a plea for the development of a state research institution for parapsychology, emphasizing especially the study of hypnosis and related phenomena.—*O. Seeling* (Berlin).

275. **Young, J. C. An experiment at Fontainebleau—a personal reminiscence.** *Brit. J. Med. Psychol.*, 1927, **7**, 447–461.—A description of a year's stay at the institute of Ouspenskian philosophy at Fontainebleau founded by George Gurdjieff in 1922. The writer remained sufficiently detached to be able to give an interesting picture of the life at this institution and the personal traits of the leader.—*N. Fenton* (California Bureau of Juvenile Research).

276. **Zenker, G. Traumdeutung und Traumforschung.** (The study and interpretation of dreams.) Leipzig: Astra-Verlag, 1928. Pp. 132.—*W. S. Hunter* (Clark).

[See also abstracts 143, 170, 287, 309, 328, 339, 354, 378, 447.]

NERVOUS AND MENTAL DISORDERS

277. **Abely, P. État schizophrenique et tendances homo-sexuelles.** (A schizophrenic state and homosexual tendencies.) *Ann. méd.-psychol.*, 1927, **85**, 251–257.—A case history of a schizophrenic type with homosexual tendencies.—*P. A. Pooler* (Boston, Mass.).

278. **[Anon.] The Commonwealth Fund. Ninth annual report, for the years 1926–1927, 1928.** New York. Pp. 78.—On pages 33–49, 71–74 and 77–78 is given an account of the clinical and research work in mental hygiene and child guidance supported by the Commonwealth Fund.—*L. Ackerson* (Institute for Juvenile Research).

279. **Blake, P. A. Reclamation.** *Welfare Mag.*, 1928, **19**, 1133–1136.—An account of the educational, vocational and recreational work with feeble-minded children at the Lincoln (Illinois) State School and Colony.—*L. Ackerson* (Institute for Juvenile Research).

280. **Brill, A. A. The rôle of psychoanalysis in the prevention of nervous and mental diseases.** *Psychiat. Quart.*, 1928, **2**, 289–298.—Quoting a significant remark made by George Kirby in his introduction to Bleuler's *Text Book of Psychiatry* regarding the sharp contrast between the older descriptive psychiatry of Kraepelin and the newer interpretive psychiatry of the present day, Brill notes some of the changes which have developed in the method of teaching psychiatry. He especially emphasizes the fact that until the advent of Freud, with very few exceptions, no attempt was made to understand the nature and mechanisms of the functional neuroses. The author is convinced that not only are many neuroses and psychoses now being cured by the psychoanalytical method, but that much preventive work is being done by physicians, by parents and by teachers who are making good use of the knowledge furnished by Freud.—*E. Burr* (Vocational Guidance Bureau).

281. **Brown, S., 2nd. Preventive work undertaken during the year and future plans.** *Psychiat. Quart.*, 1928, **2**, 333–341.—Brown traces the growth of child guidance clinics, outlines the duties of the clinical personnel and notes the types of cases brought for examination. He concludes his report with the statement that a mental hygiene movement comparable to that of other wide educational movements, such as the National Tuberculosis Association, for example, which has helped to bring about modern, hygienic living, will doubtless be undertaken both by state and national agencies in the future.—*E. Burr* (Vocational Guidance Bureau).

282. **Callewaert, —. Pathogénie de la crampe des écrivains. Epreuve de la rééducation. (Présentation de malades.)** (Pathogenesis of writer's cramp. Attempts at reeducation. Presentation of cases.) *J. de neur. et de psychiat.*, 1927, **6**, 371–377.—The author distinguishes: (1) the classical cramps of constitutional origin in normal though hyperkinetic and emotional individuals who have acquired a faulty technique, curable by appropriate reeducation; (2) allied conditions or pseudo-cramps in which central or peripheral lesions produce and maintain disturbances similar to those due to genuine cramps; reeducation does not result in the development of a curative automatism. The reeducation consists of: (a) relaxation by light massage, passive movements, relaxed positions; (b) exercises which combine the movements of the hand and fore-arm with movements of the phalanges. The teaching of writing should generally be based on more physiological considerations.—*H. C. Syz* (New York City).

283. **Callewaert, —. Pathogenie de la crampe des écrivains. Epreuve de la rééducation. Discussion.** (Pathogenesis of writer's cramp. Attempts at reeducation. Discussion.) *J. de neur. et de psychiat.*, 1927, **6**, 419–426.—Discussion of Callewaert's reeducational method and of Decroly's "global" method of teaching writing to children. Decroly cites data from the development of speech which in his opinion give further evidence of the validity of his method: the children start out with the writing of entire words and sentences without being taught first to write individual letters. De Greeff suggests the application of a similar method to the teaching of orthography: the acquiring of an automatic knowledge of the exact form of the word as it is modified according to its function in the sentence, practically without grammatical exercises.—*H. C. Syz* (New York City).

284. **Clerambault, G. Syndrome méchanique et conception mécaniciste des psychoses hallucinatoires.** (A mechanistic syndrome and a mechanistic conception of hallucinatory psychoses.) *Ann. méd.-psychol.*, 1927, **85**, 398–413.—The doctrine set forth in this paper finds expression in the following conclusion of the author: "A certain mechanistic syndrome which we provisionally call syndrome 'S' (and which may be called a 'syndrome of echo,' of 'dissidence' or of 'intrusion') figures, by its own right, whether it be basal or adventitious, in a great number of psychoses, whether they are temporary or chronic: some semi-physiological, as mania; others toxic or grossly cerebral (general paresis, schizophrenia, cerebral tumors). It is exclusive of the 'confusions' and less advanced dementia praecox. It is constituted of positive and negative phenomena. . . . In the hallucinatory chronic psychoses, the syndrome is the *base* of the 'explanatory' delirium. It becomes the *nucleus* of a second delirium, autoconstructive."—*P. A. Pooler* (Boston, Mass.).

285. **Cohn, E. J. Shakespeare, the psychiatrist: an alienist shows that Shakespeare knew intuitively much that science today considers new.** *Welfare Mag.*, 1928, **19**, 1124–1127.—*L. Ackerson* (Institute for Juvenile Research).

286. **Courbon, M. De l'étiologie des psychoses en foyer.** (The etiology of psychoses of the household.) *Ann. méd.-psychol.*, 1927, **85**, 242–246.—Psychoses simultaneously developed in the members of the same household are of four types, as follows: (1) Psychoses by *induction*, in which the mental disturbances of one member are directly propagated to the next member; (2) psychoses by *postduction*, in which the psychoses of one member bring about a confusion in the household, reacting on the next member as in repercussion; (3) psychoses by *cumduction*, in which two or more members have the same constitutional make-up, thus predisposing them to the same disorder; (4) psychoses by *coincidence*, in which the law of chance finds expression.—*P. A. Pooler* (Boston, Mass.).

287. **Courbon, M., & Fail, G. Des effets aphrodisiaques de la peur.** (The aphrodisiac effects of fear.) *Ann. méd.-psychol.*, 1927, **85**, 246–251.—This is a case history of a psychopathic patient who was seized with a violent fit of masturbation after she had witnessed a minor surgical operation.—*P. A. Pooler* (Boston, Mass.).

288. **Courbon, P. & Plouffe, —. Délires émotionnels de persécution à deux avec réprésentations imaginaires et réactions agressives de défense par inadaptabilité au milieu social.** (Emotional delusions of persecution with imaginary representations and aggressive reactions of defense because of inadaptability to the social environment.) *Ann. méd.-psychol.*, 1927, **85**, 438–446.—This is a report of the case histories of two middle-aged patients, who developed mental troubles because of their inability to adapt to the social environment into which they had recently moved.—*P. A. Pooler* (Boston, Mass.).

289. **Crouzon, O., Burke, H., & Coste, —. Délire d'influence et tumeur cérébrale.** (Delusions of influence and cerebral tumors.) *Ann. méd.-psychol.*, 1927, **4**, 322–336.—This paper consists of a case history of a patient who developed ideas of persecution and somatic symptoms in connection with a cerebral tumor. The observation extends over a period of more than five years. In contrast to the conclusion of Targowla that intellectual degeneration usually accompanies brain tumor, this case seems to show no deterioration of intellect. "It does not seem doubtful that there exists an important relation between the evolution of the cerebral tumor and that of delirious conditions."—*P. A. Pooler* (Boston, Mass.).

290. **d'Allonnes, G. Les hétéro-impulsions.** (Hetero-impulsions.) *Ann. méd.-psychol.*, 1927, **85**, 414–422.—By hetero-impulsions, one means the impulsions proper to the states of influence with or without hallucinations, which seem to the patient to be provoked, not by his own will, but by a strange will. They may be of three types, as follows: (1) an hallucinatory order to commit an act or to refrain from committing an act; (2) quasi-hallucinatory hetero-impulsions; (3) interpretative hetero-impulsions. Regis classifies them as follows: pure motor hetero-impulsions, psycho-motor hetero-impulsions, and psychic hetero-impulsions. "The impulsion becomes a hetero-impulsion only on a particular psychopathic basis, which constitutes a syndrome of influence. . . ." The question as to whether or not a patient suffering from this impulsion is responsible for his act constitutes the medico-legal aspect of the problem.—*P. A. Pooler* (Boston, Mass.).

291. **Damaye, H. Considérations sur la schizophrenie et ses associations.** (Observations on schizophrenia and its associations.) *Ann. méd.-psychol.*, 1927, **85**, 218–223.—This study calls attention to the relative frequency, in the clinic, of the association of the schizophrenic syndrome with other psychoses or other mental disturbances. Invariably the melancholias, the divers deliriums, and the hysterias, as examples, show schizophrenic symptoms, which are likewise evident in some cases of general paresis. Nor are such confusions lacking in the field of general medicine. The heart, for instance, can present at the same time endocarditis, myocarditis, and pericarditis in different proportions. A further observation of this disturbance brings to the foreground the need of recognition of the slightly abnormal individual so that he may receive proper treatment at the hands of the psychiatrist He frequently offers a more difficult problem for society to solve than a person who is markedly abnormal, because the latter is under instiutional care. Continuing this study, the author finds no real demarcation between schizophrenia and dementia praecox, using both terms indiscriminately. Furthermore, he fails to find any sharp distinction between an "acute" delirium and delirium tremens.—*P. A. Pooler* (Boston, Mass.).

292. **Davis, J. E. Promoting desirable attitudes in the mentally sick.** *Occup. Therap. & Rehab.*, 1928, **7**, 313–318.—Describes typical patients who have lost interest in competitive relationships of life, but still find pleasure in reproducing these attitudes in the atmosphere of some athletic game. Cooperation with team-mates may gradually lead to cooperation with neighbors or other associates in everyday life. This type of treatment differs from the usual occupational therapy, in that in the latter the patient realizes that the motive is therapy, whereas in the present scheme the subject participates in athletics first of all merely as a diversion. The author has been successful in organizing baseball, basket-ball, volley ball, tennis and swimming teams, whose personnel consisted of psychopathic or neurotic types. Great care must be used in selecting the types of athletic activity for a particular patient, considering such things as his early associations, general social relations and physical ability. It is often profitable to put a number of stable individuals on a team made up of patients.—*H. E. Burtt* (Ohio State).

293. **Dearborn, G. V. N. A few notes on the biology of feeblemindedness.** *J. Nerv. & Ment. Dis.*, 1928, **68**, 250–260.—The human brain was originally merely a muscle-coordinating center with the faculty of slowly but constantly developing complex brain-patterns. Upon simple hereditary neurograms more complicated ones were built and in turn made hereditary. No rapid development was possible, however, until symbolization by speech was evolved. The human cortex represents qualities and relations apperceived and comprehended by the individual experience in its effective environment. In general, ideas are relations and the "higher," i.e., the more "intelligent" of these relations, being inherently new, are integrated into the cortex only by words, because only words, being motor experiences, have the force to make the explicit integration between the neurons concerned. An analysis of the mind of the most primitive man would suggest feeble-mindedness as we now know it minus primitive man's progressive initiative and power to learn. Feeble-mindedness is often some sort of degenerative inflammatory process affecting the cells of the layers of the voluntary neopallium. These cells are fewer, show poor development, irregular arrangement and poor intercoordination. In congenital cases fewer neurons are present and these have imperfections of a morphological cellular nature. The feeble-minded are characteristically planless, slow and uncertain in mentation, and always, barring special training of some sort, lack the normal number of words in their vocabulary. References.—*R. A. Young* (Boston Psychopathic Hospital).

294. **de Courcy, J. L. Thyroidectomy in mentally disturbed patients with exophthalmic goitre. With report of twelve cases in which the psychosis was relieved by operation.** *J. Nerv. & Ment. Dis.*, 1928, **68**, 384–387.—*R. A. Young* (Boston Psychopathic Hospital).

295. **de Greeff, Et. Essai sur la personalité du débile mental.** (The personality of the feeble-minded.) *J. de psychol.*, 1927, **24**, 400–454.—Observations, experimental and otherwise, resulting from eighteen months' of intimate and prolonged contact with a large colony of abnormal children, to whom the author was educator, advisor, and doctor. Practically all of the observations pertain to the social relations of the children. An experimental attempt to determine the relative status, in the estimation of the child himself, of those who surround him was attempted. During an informal interview, by means of verbal instruction and pantomime, the following experiment was performed: The experimenter presented a piece of paper upon which he drew three points placed in line. The middle point, the child was told, represented himself, the point to the right his foster-parent, and the one to the left his best friend (usually another

subnormal child). He was then instructed to draw three lines, one under each point, representing by the length of the lines the relative merits of himself, his foster-parent, and his best friend. 48 children were used. These were divided into 3 groups of 16, the first comprising normal and slightly subnormal children of 10 years and over; the second, feeble-minded children from 7 to 10 years; and the third, feeble-minded children slightly under 7 years. The first group placed themselves first (36.3%), their foster-parents second (34.8%), and their friends last (28.9%). The second group gave the same order of placement with the following values: 43.4%, 32.8%, 23.8%. The third gave first place to themselves (48.5%), second place to their friends (28.4%), and third place to their foster-parents (23.1%). It is concluded from the foregoing that, "in practice not only does the feeble-minded child not feel inferior to his environment, but to the contrary he emerges from it and sees himself as more important in proportion as he is more backward." A group of children were also called upon to judge the relative intelligence of the foster-parent, the advisor, and the doctor. In a mixed group of children the foster-parent received first place, the doctor second, and the advisor third. In judging the relative intelligence of themselves, their best friends, and their attendants, they rated themselves highest, their best friends next, and their attendants last. Another somewhat different experiment showed an inability to calculate duration, and especially to adapt their behavior to future events. From the social point of view the author thinks that mental debility should be scaled not according to mental age but according to the relative development of personality. He believes that the psychiatrists find less mental debility among the population than the pedagogues and the theorists because they judge mental debility from the development of personality as a whole. Especially does the author take issue with those who claim that the subnormal child feels his inferiority and takes steps to compensate for it. "The feeble-minded," he says, "judge the rest of humanity by reference to themselves, as the normal man judges the feeble-minded by reference to himself. And both are deceived."—*N. L. Munn* (Clark).

296. **Delacroix, H. L'aphasie selon Henry Head.** (Aphasia according to Henry Head.) *J. de psychol.*, 1927, **24**, 285–322.—A critical analysis of Head's *Aphasia and Kindred Disorders of Speech*, a book which Delacroix considers of the greatest importance in the history of aphasia. There are few unfavorable criticisms. The author feels, however, that Head's discussion of semantic aphasia, which occurs at the conclusion of the work, is scarcely penetrating enough. Whereas Head stresses the impotency of verbal formulation in semantic aphasia Delacroix thinks that the latter may quite well be attributed to an inability to construct unities and to orient in the large schemata of space and time. He expresses agreement with Head in the latter's clinical approach to the problems of aphasia. Objective observation, rather than logical deduction from the nature of language, is the most fruitful method of approach.—*N. L. Munn* (Clark).

297. **Delmas, M. A propos de l'automatisme mental.** (On mental automatism.) *Ann. méd.-psychol.*, 1927, **85**, 224–228.—Janet has defined the mental automatism as an *ensemble* of "inferior activities," a definition which includes a great number of states—normal ones (dreams, reveries, distraction, association of ideas, recall, and imagination), and pathological ones (obsessions, certain maniacal elements, and melancholia). Nyrac, on the contrary, deems it necessary to differentiate between two varieties of automatisms, the psychological and the pathological. The former comprises those phenomena which, at first carried out with the effort of attention, finally become automatic, requiring a minimum of effort. The latter comprises those phenomena which appear to the patient to take place without his assistance (by an external mechanism), and which give the feeling that the reactions are automatic. The mental automatism, clinically primitive and fundamental, has no theoretical explanation as to its nature and origin. Clerambault has the distinction of demonstrating more completely than his predecessors the primordial importance and the unity of the mental automatism.—*P. A. Pooler* (Boston, Mass.)

298. **d'Hollander, F., & de Greeff, E. La folie d'autrui. Contribution à l'étude de l'interpsychologie morbide.** (The insanity of others. Contribution to the study of morbid interpsychology.) *J. de neur. et de psychiat.*, 1928, **9**, 619–630.—The term "interpsychology," already used by G. Tarde, has been suggested by Dupré to designate the psychology of reactions between the mentally disordered individual and the persons constituting his environment. This includes not only the judgment of the public in regard to the psychopathic disturbance but, according to the present authors, also the attitude of the patient toward his own disorder and toward his environment. Short histories of 8 patients are given, all women, belonging to the schizophrenic type (*psychoses systématisées chroniques*). Each patient believed that either husband, brother, a group of persons or the entire city were insane. The accusation of insanity, of being influenced or alienated was directed only to persons whose behavior had been observed by the patient. The authors explain that during the slow development of the mental disorder the persons in the patient's environment adjust themselves to the altered condition of the patient. The patient recognizes the altered attitude of those who surround him and tries to understand these objective changes. As he is certain of his own integrity and convinced of the absolute value of his judgment, he comes to the erroneous interpretation of the actual changes in his environment. His diagnosis of insanity in others expresses the need to be in accord with the external circumstances.—*H. C. Syz* (New York).

299. **Dickinson, E. D. Educational and emotional adjustments of stuttering children.** *Teach. Coll. Cont. Educ.*, No. 314. Pp. vi + 59.—Out of a school population of 7,138 in seven New York City schools a group of 61 stutterers were found and carefully paired with a control group. Both groups were then

subjected to a testing program involving the following measures: (1) Pintner-Paterson Shorter Performance Scale, (2) Stanford Achievement Tests, (3) Woodworth-Matthews Questionnaire, (4) Woodworth-Cady Questionnaire, (5) Kent-Rosanoff Free Association Test, (6) Wood-Rowell Health and Growth Examination, (7) a specially constructed test for correct pronunciation of vowels and consonants, and (8) the scale for judging personality traits used by Terman in his study of exceptionally bright children. No significant differences were found except for the test of pronunciation. The conclusion is drawn that if the findings of the study be accepted as valid the procedure for corrective work will swing from the present prevalent emphasis on the eradication of neuropathic or psychopathic tendencies toward a direct attack upon the improvement of speech habits. The pertinent literature is summarized and a bibliography of 25 titles is appended.—*H. H. Remmers* (Purdue).

300. **Eckstein, A. Über die gesteigerte Erregbarkeit des Brechzentrums als Ursache des pylorospastischen Urbrechens und ihre Bekämpfung durch den Dauerschlaf.** (The increased irritability of the vomiting center as a cause of pylorospastic vomiting and its treatment by means of continual sleep.) *Zsch. f. Kinderhk.*, 1928, **45**, 423–438.—Eckstein shows that, in contrast with the normal infant, in pylorospastic vomiting a special irritability of the vomiting center is present. The author has succeeded in differentiating the characteristic vomiting of the local spasm of the pylorus from the symptom complex of pylorospasm. He shows further that with the increased irritability of the vomiting center some stimuli are not adequate to produce vomiting. The continued sleep treatment has stood the test therapeutically.—*O. Seeling* (Berlin).

301. **Fetterman, J. Traumatic neurosis.** *J. Amer. Med. Asso.*, 1928, **91**, 315–319.—A traumatic neurosis occurs in a susceptible individual. It is born in fright, is fed in fear, and then as it grows it develops its aim, getting for the patient sympathy and shekels.—*G. J. Rich* (Bellevue Hospital).

302. **Fletcher, J. M. The problem of stuttering: a diagnosis and a plan of treatment.** New York: Longmans, Green, 1928. Pp. xiv + 462. $2.25.—This volume surveys the various theories of stuttering, one of the most widely spread of the neuroses, and the therapeutic methods which have been devised for this disorder, and subjects these to a critical examination. As a result of experimentation and clinical experience, the author has arrived at the conviction that the present systems of dealing with the problem of stuttering are failing, in that they are wholly inadequate and scientifically objectionable. The book represents an attempt to offer certain explanations of the apparent failure of present methods together with a more sound psychological approach to this old problem; in fact, the author reiterates the modern viewpoint, that stuttering is not a speech defect, but a psychological disorder and consequently must be treated by psychological methods and not by the usual phonetic systems of training. The problem has important bearings on mental hygiene as a whole, especially in its preventive aspects, because what may crop out in one child as stuttering, may crop out in another of the same family as a different neurosis. The volume is divided into nine chapters and an appendix, which deal successively with the history of stuttering, its terminology and classification, statistical data and their significance, the various theories of causation (physical, physiological and psychological), symptomatology, stuttering as a form of social maladjustment, environmental and occupational therapy and educational prophylaxis. The author is of the opinion that the therapeutic problem of stuttering involves the individual as a whole. The stutterer must select an occupation which will involve the minimum of social excitants of stuttering and at the same time the maximum of the kind of talking which he has found by experience to be easiest for him. Some general rules on mental habits are desirable, such as an intelligent knowledge of the real nature of the difficulty, particularly the mental and emotional states which precipitate the difficulty and make it worse, an analysis of the character traits and an understanding of the fundamental or associated fear and anxiety. Index. No bibliography.—*I. H. Coriat* (Boston, Mass.).

303. **Frisch, F. Das "vegetative System" der Epileptiker.** (The "vegetative system" of the epileptic.) *Monog. a. d. Gesamtgeb. d. Neur. u. Psychiat.*, 1928, No. 52. Pp. 57.—The author relies of course upon the theory of the constitution of Friedrich von Krauss, which emphasizes the vegetative (i.e., visceral) nervous system and classifies it under the more comprehensive vegetative system, in which it acts as a regulator to bring the electrolytic reserves to the place where they are needed. This system is the phylogenetically older "deep personality," spontaneously creative, in contrast with the centrally organized, purposefully conscious, phylogenetically younger "cortical personality." According to this theory, epilepsy is not to be regarded as a purely nervous disorder. The fits, of course, presuppose a "conditional brain stimulus"; but this is unspecific, something else can be substituted for it. The individual period of the fits depends far more upon the vegetative deep personality, upon which, however, the central nervous system also gains influence in a vicious circle. In the analysis of the vegetative system one must keep in mind not only the whole but also the relative autonomy of the part. In "vegetatively stigmatized persons" (von Bergmann) a seemingly significant factor in the disposition to epilepsy is a variation of tolerance in the sphere of nitrogen metabolism, in which the lability itself constitutes a characteristic feature, with a morbid temperamental instability. The increase of excitability runs parallel to that of the "swelling," which is connected with the formation of acid intermediate products (reduced CO_2 production, which favors the nitrogen increase), retention of NaCl, increase of highly dispersed protein sols, and deficiency of calcium. Therapy must be directed toward securing a far greater influence over the organic-regenerative forces of the human

deep personality. Bibliography of about 200 numbers.—*W. Wirth* (Leipzig).

304. **Giraud, P., & Thomas, A. Meurtre impulsif et syphilis encéphalique.** (An impulsive murder and encephalic syphilis.) *Ann. méd.-psychol.*, 1927, 85, 432–438.—This is a case history of a murderer who had encephalic syphilis. The clinical evolution of the case corresponded to a slow process of irritative sclerosis, recalling the anatomical form of Nissl-Alzheimer.—*P. A. Pooler* (Boston, Mass.).

305. **Hautrive, A., Dardenne, E., & Focquet, P. Symptômes schizophréniques et paralysie générale de seconde génération.** (Schizophrenic symptoms and general paresis in the second generation.) *J. de neur. et de psychiat.*, 1928, 9, 631–632.—The mother of the patient presented signs of general paresis. The patient, a young man of 19, without specific features in his prepsychotic development, suffered from a catatonic disorder of sudden onset. This was followed after 6–7 months by a euphoric condition with megalomanic ideas and behavior, and physical signs of general paresis. Upon malaria treatment there was complete disappearance of the agitation, no recurrence of the schizophrenic features, responsive affects, but still some physical signs of general paresis and some ideas of grandiosity. In this patient according to the author, we have to deal with a combination of general paresis and schizophrenia; the disappearance of the schizophrenic phenomena is probably due to a remission rather than to curative action of the malaria treatment.—*H. C. Syz* (New York).

306. **Janet, P. A propos de la schizophrénie.** (Concerning schizophrenia.) *J. de psychol.*, 1927, 24, 477–492.—A description of the behavior of two schizophrenics studied by the author. In neither case was there a destruction of the psychological functions such as perception, memory, or language. There was not a dissociation such as that described by Bleuler and insisted upon by Minkowski. Janet thinks that they have used this expression in too vague a manner. "The word dissociation," he says, "must be reserved for the rupture of associations constructed in the past, for the rupture of an association between a word and its significance for the rupture, between the different consecutive movements of the same act, in a word, for the destruction of a primary tendency, inherent or acquired." Many of the apparent dissociations are the result of faulty attention. Morose inaction was an outstanding characteristic of both persons. One of the subjects developed a "triumphal reverie."—*N. L. Munn* (Clark).

307. **Johnson, W. O. Psychosis and hyperthyroidism.** *J. Nerv. & Ment. Dis.*, 1928, 67, 558–566.—A study of operative goiter cases was undertaken for the purpose of aiding in distinguishing, at an earlier date, true psychosis with associated goiter from the acute maniacal deliriums that are thyrotoxic in origin, and to help in arriving at a more definite prognosis. Following a review of the literature the author gives a composite symptom picture of an acute type of hyperthyroidism that terminates in toxic conditions. Bibliography.—*R. A. Young* (Boston Psychopathic Hospital).

308. **Karpman, B. Psychoses in criminals: clinical studies in the psychopathology of crime. II. Clinical and casuistic material.** *J. Nerv. & Ment. Dis.*, 1928, 67, 355–374; 478–488; 599–608; 68, 39–54.—The third and fourth of a series of articles on the subject. (See also I: 138, 364; II: 1902.) To prove that generalities are dangerous and that criminality is not a single reaction form, but embraces in fact a number of diverse and specific types, each having its own particular etiology and setting as well as particular psychic expression, a case is cited in detail of an intelligent colored male serving a life sentence for murder. The case demonstrates that when an individual is confronted by an external situation which is not acceptable to the ego, he develops a set of reactions whose designed function is to make life bearable. These reactive psychoses stand in a class by themselves, differing from other psychoses in the manner of their onset and maintenance, individual behavior, ideational content, affective attitude, good prognosis and easy treatment.—*R. A. Young* (Boston Psychopathic Hospital).

309. **Kretschmer, E. Experimentelle Typenpsychologie. Sinnes- und denkpsychologische Resultate.** (Experimental psychology of types. Results in the psychology of sensation and thought.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1928, 113, 776–796.—With the comprehensive application of experimental psychology to the differential psychology of constitutional types the author treads a new path. The studies of his collaborators have already provided a great deal of material, the importance of which the author emphasizes for the psychology of sensation and thought. In the affective and psycho-motor fields the studies are still in progress. The methodology of this line of study lies in the combination of body structure indices, descriptive diagnosis of body structure, clinical diagnosis, experimental and descriptive diagnosis of personality. The correlation of body structure indices with experimental measurement has proved itself a possible means of practical diagnosis, although of a purely mathematical nature. In the experiments similar reaction patterns and results are discovered if one proceeds from the pyknic type of body structure, the cyclothymic temperament and the circular psychosis. The same holds for the series leptosomic-schizothymic-schizophrenic. Those of the leptosomic type also show themselves in the experiments as the progressive type of the schizothymic group, the athletics are similar, while the dysplastics give scattered results. The Rorschach tests, tachistoscope tests, with colored figures and series of letters or syllables, reaction and association tests were used. They gave an indication of typological differences with reference to sensations of color form, perception of the whole and of details, and of subjective or objective perception, of perseveration and certain forms of association. In the pyknic type sensitivity to color is highly developed, in the leptosomic sensitivity to form. The "split-

ting phenomena" were treated thoroughly—the formation of separate divided intentions in consciousness. That this ability is greater in the leptosomic and the schizothymic group is a definite experimental parallel to Bleuler's theories of schizophrenia. The facts of abstraction can be included with the "splitting phenomena." Here also belongs the increased perseveration in the leptosomic group, for the capacity to split off and the capacity to hold lie on a line. This is also important in the formation of complexes. The associations of the leptosomic type are inactive and dull, those of the pyknic type colored with feeling. The leptosomic type think more analytically, abstractly, intensively, subjectively; the pyknic type more synthetically, concretely, extensively, objectively. The autistic conceptions of the world on the one hand and the realistic on the other hand can thus be studied experimentally in their elemental factors. The author sees two roots of autism, the affective root of "psychesthetic proportion" (partly over-susceptibility, partly dullness), and the rational psychological root of ability to discriminate. Conceptions of the world and their elementary factors can also be demonstrated from the point of view of constitutional psychology in artistic and scientific production. The fact that typological characteristics lead uninterrupted from the normal to the diseased has nothing to do with the characteristic process of schizophrenia itself.—*S. Krauss* (Heidelberg).

310. **Kreyenberg, G. Körperbau, Epilepsie und Charakter.** (Body structure, epilepsy and character.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1928, **112**, 506–548.—A careful study of 560 male and 200 female epileptics who were inmates of institutions was undertaken according to Kretschmer's method and without reference to the stage of the disease. The results of the investigation showed a distinct affinity of genuine as well as symptomatic epilepsy for the dysplastic and athletic types of body structure, while the pyknic type was almost entirely unrepresented. In individual dysplasias and dysglandular symptoms this affinity was pursued still further and shown in tables. In regard to character the Kretschmer description proved correct in 2/3 of the cases. Epileptics are "clammy," coarse, familiar, bigoted, troublesome, pedantic, egocentric; the epileptoid are rude, brutal, with inclination toward affective crises, dipsomania and pathological desertion and truancy. The former are predominantly of the dysplastic type, the latter of the athletic type.—*S. Krauss* (Heidelberg).

311. **Lennox, W. G., & Cobb, S. Epilepsy.** Baltimore: Williams & Wilkins, 1928. Pp. 197. $3.50. —The scope of the monograph is a brief review of the literature on epilepsy and presentation of evidence which may throw light on the mechanism involved in seizures and on the cause and treatment. In discussing the mechanism four theories are described: (1) the irritation theory, (2) the release theory, (3) the short circuit theory, and (4) the explosive theory. The authors' belief is that epileptic seizures are neurological phenomena, usually motor, caused by some change in the nerve cells. Factors considered as of etiological importance in the production of seizures are discussed, such as gross lesions of the brain, psychogenic factors, physico-chemical changes in nerve cells, alteration in the circulatory system, metabolism, gastro-intestinal findings, blood, spinal fluid and urinary findings. Considerable space is given to a review of the literature on the acid-base equilibrium. Summarizing, they say "Alkalosis induced in epilepties by administration of alkali or by over ventilation may be followed by seizures. Acidosis, whether induced by rebreathing, by ketosis or by the administration of acid or acid forming salts, in some patients causes a reduction in the number and severity of seizures." Treatment is discussed from the standpoint of considering the seizures as a symptom only. —*J. M. Thomas* (Boston Psychopathic Hospital).

312. **Lepel, G. F. Schizophrenie bei ehemaligen Musterschülern.** (Schizophrenia in previously bright children.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1928, **112**, 575–604.—The large number of bright pupils who become psychopathic has been emphasized previously by Kraepelin. The author studied the course of the psychosis with anamnesic and katamnesic integration in 30 cases for whom detailed medical histories were available. Most of them had already shown the prepsychotic peculiarities of personality: excessive industry and ambition without rational control, pedantry, fanatical honor, accentuated self-consciousness, exclusiveness (therefore lack of friends), occasionally sexual coldness. Kretschmer traces the good performances back to "autism." The process is naturally not an invariable result, the etiology generally is unclear. The beginning is manifested in character changes: improper behavior, queer pranks, obstinacy, irritability, ideas of prejudice, lack of concentration, feelings of insufficiency appear. These stand in sharp contrast with previous conformity and virtuous conduct. The course of the disease is not clinically differentiated from that of other well-known forms. Intelligence and knowledge of school subjects are often retained in the disease with impairment of the emotions and the will; things learned mechanically are easily reproduced, but new mental processes are for the most part lacking. The author is opposed to the conception of schizophrenia as a "disease of consumption" and confines himself to description.—*S. Krauss* (Heidelberg).

313. **Marinesco, G., Nicolesco, M., Iordanesco, G. Sur le mécanisme physiologique de certains troubles hystériques et leur rapport avec les phénomènes d'origine extrapyramidale.** (The physiological mechanism of certain hysterical maladies and their relation to phenomena of extrapyramidal origin.) *J. de psychol.*, 1928, **25**, 546–576.—Basing their conclusion upon several case studies which are presented in this article, the authors believe that many symptoms of hysteria resemble those arising from extrapyramidal injuries, and especially post-encephalitic syndromes. "Hysterical symptoms, from the phylogenetic point of view, have their counterpart in ancestral manifestations, and, from the ontogenetic point of view, in reactions dependent

upon sub-cortical centers . . . this seems to explain, to a certain extent, the physio-pathological mechanism of hysteria, by the liberation and automatism of sub-cortical centers."—*N. L. Munn* (Clark).

314. **Martland, H. S. Punch drunk.** *J. Amer. Med. Asso.*, 1928, **91**, 1103–1107.—A blow on the head may cause unsteadiness, mental confusion, slowed movements, staggering gait, and tremors, some of which may be permanent. These symptoms of so-called concussion of the brain are due primarily to multiple punctate hemorrhages in the deeper structures of the brain, especially the basal ganglia. A mechanical theory of their causation is expounded.—*G. J. Rich* (Bellevue Hospital).

315. **McCartney, J. L. Sadism and masochism: with a discussion on esoteric flagellation.** *J. Nerv. & Ment. Dis.*, 1928, **68**, 28–38.—Points out the dangers which may result from corporal punishment of children. Repeated whippings around the age of puberty are likely to predispose children to seek for emotions and excitation in whippings which will lead to sadism or masochism. It is also dangerous for parents and teachers to whip children, as it tends to give birth to morbid desires which may turn to veritable crimes.—*R. A. Young* (Boston Psychopathic Hospital).

316. **Meninger, W. C. The mental disturbances associated with pituitary disorders.** *J. Amer. Med. Asso.*, 1928, **91**, 951–955.—There is no uniformity of association of any mental picture with any type of pituitary disorder. Preadolescent hypopituitarism usually shows intellectual retardation, postadolescent hypopituitarism the schizoid picture, and late hyperfunction of the pituitary a cyclothymic reaction.—*G. J. Rich* (Bellevue Hospital).

317. **Miller, J., Simon, T., & Vié, J. Un cas d'athetose double.** (A case of double athetosis.) *Ann. méd.-psychol.*, 1927, **85**, 234–241.—This is the case history of a boy of fourteen who had double athetosis. Tests revealed a mental-age level which would have enabled him to live in the outside world if his physical infirmities had not made institutional care necessary.—*P. A. Pooler* (Boston, Mass.).

318. **Minkowski, E. L'autisme et les attitudes schizophréniques.** (Autism and schizophrenic attitudes.) *J. de psychol.*, 1927, **24**, 465–476.—A review of the literature bearing upon the relation between autism and schizophrenic attitudes which is based largely upon Bleuler and previous publications of the author. Two kinds of autism should be distinguished, "An *autisme pauvre* and an *autisme riche*, reserving the last term for cases in which we undeniably establish, in the genesis of the symptoms, the influence of factors from the interior life. . . . The idea of autism thus acquires more and more independence. It constitutes in our opinion the real keystone to the whole psychopathology of schizophrenics." The study of schizophrenic attitudes, he thinks, deserve a special place in the psychopathology of schizophrenia.—*N. L. Munn* (Clark).

319. **Minkowski, E. Quelques remarques sur la psychopathologie de la démence sénile.** (Some remarks regarding the psychopathology of senile dementia.) *J. de psychol.*, 1928, **25**, 79–90.—The author finds that those afflicted with senile dementia have an accentuated disorientation in space and time, defective memories, false recognitions, and gross confabulations. In the three cases which he analyzes the temporal element is outstanding. He says that "the vestiges of mental activity, observed in those afflicted with senile dementia, rest above all . . . on the essential factors of life having a temporal aspect."—*N. L. Munn* (Clark).

320. **Murphy, J. P. H. Epilepsy and schizophrenia.** *Med. J. & Rec.*, 1928, **2**, 3, 77–99, 110–112.—Epilepsy and schizophrenia are not incompatible in the same person. Nevertheless, "while convulsions may occur in schizophrenia, and schizophrenic episodes appear during the downward course of epilepsy, the two diseases in their usual manifestations are totally different both in their mechanisms and symptoms. While in precox, there is a disproportionate and bizarre elaboration of definite ideas with dissociation of affect, in epilepsy there is no psychic splitting, and no localized ideas or emotions are affected one more than the other. The process consists of a diffuse wiping out of all interests, a disintegration of all ideas, an obliteration of all emotions. It may be well, therefore, to bear in mind the possibility of two or more psychotic entities existing in the same patient at the same time, and carefully consider which form of disease occupies the major portion of the field before labeling one with a definite diagnosis."—*R. C. Givler* (Tufts).

321. **Notkin, J. A contribution to the subject of epilepsy, with special reference to the literature.** *J. Nerv. & Ment. Dis.*, 1928, **67**, 321–345; 457–477; 567–598.—*R. A. Young* (Boston Psychopathic Hospital).

322. **Nyssen, R., & Helsmoortel, J., Jr. Troubles du caractère relativement précoces et troubles moteurs tardifs chez un enfant encéphalitique.** (An encephalitic child with relatively early disorders of character and late motor disorders.) *J. de neur. et de psychiat.*, 1927, **6**, 416–417.—Report of the case of a boy of 15 who, at the age of 8, suffered from an encephalitic attack, an apyretic but profoundly lethargic condition of 5–6 days' duration. A change of character developed 8 or 10 months later: emotional instability, stubbornness, attacks of rage, suicidal threats and features of schizophrenic coloring. Motor disorders appeared much later, that is, about 2 years ago: oculogyric crises with a definite hyperexcitability of the labyrinth in the free interval; monotonous and poorly articulated speech, salivation, slight facial rigidity.—*H. C. Syz* (New York City).

323. **Patry, F. L. Theories of bisexuality with report of a case.** *Psychoanal. Rev.*, 1928, **15**, 417–439.—The patient is male, 31 years old, unmarried, physically sound except for partial deafness, heredity not good but not markedly abnormal. He is hallucinated (voices) and deluded, but with some insight; the content of his delusions is that he is physically changing into a woman. The diagnosis is hebephrenia and the prognosis poor. Bisexuality is

held to be normal to a stage of early childhood, and the perversion is probably due to fixation at this level through special obstacles preventing transition to the next step. Psychoanalysis and endocrine therapy are suggested.—*R. R. Willoughby* (Clark).

324. **Pearson, H. J. The psychogenic factors in the sequelae of cerebral trauma. Report of two cases.** *J. Nerv. & Ment. Dis.*, 1928, **67**, 449–456.—Certain symptoms such as headache, dizziness, restlessness, fatigability, forgetfulness, slowness in thought and changes in personality often develop after head injuries. Undoubtedly organic changes in the nervous system are responsible for some of the post-traumatic symptoms, but this is not always true. Two cases are given to show the necessity of a thorough psychiatric study in order to determine the pathogenesis of the symptoms. In one case the trauma was only a concurrent precipitating factor in the change in personality and in the other case the trauma produced some degree of security for the patient in his family circle and the need of his overt behavior ceased. In neither case could any organic damage to the central nervous system be held responsible for the symptom complex. Bibliography.—*R. A. Young* (Boston Psychopathic Hospital).

325. **Raynor, M. W. Problems in the prevention of the functional psychoses.** *Psychiat. Quart.*, 1928, **2**, 299–306.—Preventive medicine as applied to psychiatry and especially to the so-called functional neuroses is of recent origin. These disorders, largely because they resisted understanding in terms of organic reactions, have been more difficult to disengage from the traditional conception and to view from a scientific angle. The conception of the unconscious, personality make-up, and dynamics as applied to human thought and conduct, opened the way to understand this group. Studies in heredity have failed to establish that mental disorders are inherited and neuropathologists have shown that there are no organic brain changes in dementia praecox. These views produce a hopeful attitude. The functional psychoses present many problems which are yet to be elucidated; two of these, personality make-up and the importance of the family life, if understood, will contribute to their solution. The personality make-up may be looked upon as the integrated total reactions which are characteristic of an individual. The personality is not static; it is in a state of constant development. The psychological environment of the family and its influence upon the development of the personality and mental life of the individual in childhood and adulthood nave not been fully appreciated nor given the consideration which they deserve. Raynor reports and discusses in detail one case from the Bloomingdale Hospital records.—*E. Burr* (Vocational Guidance Bureau).

326. **Sachs, B. The prevention of mental and nervous diseases.** *J. Nerv. & Ment. Dis.*, 1928, **68**, 355–369; *Psychiat. Quart.*, 1928, **2**, 275–288.—Considers the following factors of prime importance in the attempt to prevent or curb nervous and mental disorders; sound heredity; proper protection of the mother during pregnancy, and all possible care and skill at the time of delivery of the child; sensible parents who have vision enough to guide the child carefully through the first years of life; rational school training, careful supervision during the adolescent years, avoidance of sexual and alcoholic excesses, avoidance of syphilitic infections.—*R. A. Young* (Boston Psychopathic Hospital).

327. **Sadler, W. S. The truth about mind cure.** Chicago: McClurg, 1928. Pp. 206. $2.00.—This discussion of the principles of psychotherapy commemorates the one thousandth delivery of the lecture "Faith and Fear." Sadler believes that the universal basis of neurotic manifestations is inherited nervous instability, plus acquired fear. Any condition which is caused by fear may be cured by faith, but the author has never seen an instance of organic disease so cured. It matters little in what the patient's faith is placed, although religious faith seems to be the master mind cure. There are examples of different types of nervous disorders, with their treatment.—*M. P. Montgomery* (Faribault, Minn.).

328. **Schmitz, H. Erfahrungen mit der individualpsychologischen Methode nach Adler.** (Experiences with Adler's method of individual psychology.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1928, **112**, 792–806.—The author treated 27 patients systematically according to the method of individual psychology and induced katamnesic revival by means of a questionnaire. A measurable effect of the treatment could be observed in only 3 cases; high intelligence is presupposed. In the other cases the author admits certain unmeasurable effects of the method. The method does not produce a transformation of the nervous character, and the concept, moreover, cannot be extended to psychotic processes. The personality and experience of the doctor are proved to have greater significance for psychotherapy.—*S. Krauss* (Heidelberg).

329. **Schulhoff, F. Schizo-phrenie, Schizo-bulie.** (Schizophrenia and schizobulia.) Wien: F. Deuticke, 1928.—*W. S. Hunter* (Clark).

330. **van Bogaert, L. Crises oculogyres latérales puis verticales. Syndrome d'hallucinose (avec agnosie optique transitoire) et de torsion autour de l'axe chez une encéphalitique.** (Oculogyric crises, first lateral then vertical. Syndrome of hallucinosis (with transitory optical agnosia) and of axial torsion in a case of encephalitis.) *J. de neur. et de psychiat.*, 1927, **6**, 428–432.—The occurrence of oculogyric crises was influenced by emotional factors, fatigue, fluctuations in the sex life. The attacks could be induced by prolonged fixation upon a bright object. Instead of ocular crises this procedure led at times to conditions of psychic inhibition, with photopsias and disturbances of the optical perception. Such states always accompanied the ocular crises when they occurred spontaneously. The symptomatology of most of the crises was: (1) aura with fatigue, vertiginous gait, sensations of suborbital heaviness, (2) dizziness and sudden deviation of the eyes to the left with tonic fixation in this position, (3) a period with visual hallucinations (bluish cloud covering the objects, serpents moving

around), optical agnosia, inhibition of speech and at the same time a torsion of head and trunk around its own axis homonymous to the ocular deviation. The ocular deviation can be reversed and dissociated from the direction of the general postural torsion. During the period of resolution the deviation becomes intermittent, there is palpebral tremor and jerking of the ocular globes.—*H. C. Syz* (New York City).

331. **van Bogaert, L. Déclenchement des crises toniques du regard au cours du parkinsonisme postencéphalitique par l'épreuve de l'hyperpnée.** (Tonic ocular crises released by hyperpnea in the course of postencephalitic parkinsonism.) *J. de neur. et de psychiat.*, 1927, **6**, 432–436.—Report of a case in which oculogyric crises alternated with epileptic attacks; other patients presented crises of "fixed gaze" (*regard fixé*) alternating with oculogyric crises. All of these three phenomena could be induced by hyperpnea, but other physical and psychical factors also play a rôle. Some of the symptoms that accompany the oculogyric crises resemble certain features of epilepsy: pallor, mydriasis, spasm of respiratory muscles, psychic inhibition without amnesia or loss of consciousness. In one case intravenous injection of a 10% calcium chlorid or strontium bromid solution prevented the ocular attacks. The author suggests that the release of the ocular crises is due to a disturbance of the blood metabolism similar to that responsible for the development of the epileptic attack.—*H. C. Syz* (New York City).

332. **[Various.] Moderne Medizin.** (Modern medicine.) *Süddeutsche Monatshefte*, 1928, **25**, 8. [2nd ed.]—H. Kerschensteiner (Munich) gives a survey of modern medicine in all its branches. He points above all to phenomena that, like parapsychology, occultism and homoeopathy rest not upon a factual but upon a hypothetical basis. Among the other contents we emphasize especially: Salzer, F., The spiritual need of medicine; Veil, W., Progress of internal medicine; Kisskalt, K., Modern hygiene; Isserlin, M., Medical psychology; Ewald, G., Problems of personality and constitution; Bumke, O., Modern psychiatry; Birnbaum, K., The turning to psychology in modern medicine; Wolff, G., Vitalism and medicine; Lenz, F., Vitalism or mechanism? Wapler, H., The foundation and aim of scientific homoeopathy; Klemperer, G., Homoeopathy in modern medicine; His, W., On biochemistry; Hofmiller, J., Superstition in regard to the doctor and in regard to medicine; Winkler, H., The training of the medical student in the natural sciences; Brauer, L., The training of the medical student.—*P. Plaut* (Berlin).

333. **Vermeylen, G. Vol morbide au cours d'un état mélancolique.** (Morbid larceny in the course of a depression.) *J. de neur. et de psychiat*, 1927, **5**, 300–305.—Instances of larceny are very rare in states of depression. The author reports the case of a woman of 57 who during the course of a reactive depression committed several minor larcenies. This is interpreted as a reaction to unfounded accusations of having stolen, an emotional traumatism which is considered responsible also for the depression itself. The loosening of moral inhibitions in this very conscientious and sensitive patient is explained on the basis of an impaired affective tonus due to the depressive state.—*H. C. Syz* (New York City).

334. **Vermeylen, G. Morphologie et constitution psychique.** (Morphology and psychic constitution.) *J. de neur. et de psychiat.*, 1927, **6**, 395–404.—Kretschmer's types are described and correlated with the constitutional types of the French and Italian schools. Claude Sigaud of the French school bases his classification on the preponderance of one of the systems that are in continuity with the environment, and distinguishes the following types: (1) respiratory, (2) digestive, (3) muscular, and (4) cerebral. L. Mac-Auliffe, pupil of Sigaud, distinguishes a round type of slackened vitality (cellular hypoexcitability) similar to Kretschmer's pyknic type, and a flat type of accelerated vitality (cellular hyperexcitability) similar to Kretschmer's asthenic or leptosome type. N. Pende of the Italian school classifies similarly: (1) anabolic type: short, round, vagotonic, with predominance of thymus, adrenal and genital glands, emotionally stable; (2) catabolic type: long, flat, sympathotonic, with predominance of thyroid, parathyroids and hypophysis, emotionally unstable; (3) eurythmic type: harmoniously balanced.—*H. C. Syz* (New York City).

335. **von Domarus, E. Über das Denken der Manischen und Depressiven.** (The thinking of maniacs and depressives.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1928, **112**, 632–635.—The author expects the Husserl phenomenology to be productive in psychiatry only when it is not approached directly through the associational psychology of Hume, but through the categorical reasoning of Kant. In regard to expression there can be differentiated particularly the physically expressed phenomena, the information given by the mentally intentional act, the intention-fulfilling act and the intended objectivity. The error of the schizophrenic's thought lies in the mentally intentional act, that of the manic and depressive in a plus or minus of the intention-fulfilling act. The flight of ideas is conceived as continued illustration in the intention-fulfilling act. The author denies a specificity of the manic and depressive thought.—*S. Krauss* (Heidelberg).

336. **von Domarus, E. Über die Halluzinationeu der Schizophrenen.** (The hallucinations of schizophrenics.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1928, **112**, 636–638.—The peculiar nature of the hallucinations does not lie in subjective conditions but in objective circumstances, in that they belong to a certain sphere of reality; not to the ideal world of sensory illusions, but to the real world of "privileged perceptions" (Werner). Associated therewith is a peculiar condition of feeling strange and influenced; intersubjective and interobjective verification is lacking.—*S. Krauss* (Heidelberg).

337. **Wexberg, E. Zur Klinik und Pathogenese der leichten Depressionszustände.** (The clinic and pathogenesis of mild conditions of depression.) *Zsch. f. d. ges. Neur. u. Psychiat.*, 1928, **112**, 549–574.

—The many-sided clinical picture of mild depression previously included without much consideration under the title "neurasthenia" makes up about 1/7 of the admissions to an institution for nervous diseases in a large city and requires a closer analysis, which the author attempts in a very careful manner. Depression is not a nosological entity, but a symptom complex to which individual topographical psychology and phenomenology will give closer consideration, while it must also be considered carefully in the theories of affective localization arising in studies of encephalitis. It is twice as frequent among women as men. In regard to forms, the author differentiates, by using Kretschmer's theories of types, cycloid, schizoid, mixed cycloid and schizoid, constitutional, climacteric, reactive-depressive conditions and those with cerebral disease (arteriosclerosis, paralysis agitans). Heredity plays an important rôle, particularly in the cycloid; the climacteric and reactive forms are favored by familial psychopathy. With reference to body structure, the cycloid depressives are mostly of the pyknic type, the schizoid more of the leptosomic type, and the same is particularly true of the reactive depressives. The somatic symptoms are distributed over the vaso-vegetative system, the endocrines, and the gastro-intestinal tract. Disturbances of sleep and vertigo are common. The cycloid have generally more sympathicotonic, the schizoid more vagotonic phenomena. Psychically with the usual recession there is among the schizoid a paranoic residue, among the climacteric a sexual and among the reactive a hypochrondriacal. "The melancholic suffers, the reactive depressive makes himself suffer." The course is commonly periodic. From the therapeutic point of view the author recommends organotherapy and psychotherapy.—*S. Krauss* (Heidelberg).

338. **Zilboorg, G. Post-partum schizophrenias.** *J. Nerv. & Ment. Dis.*, 1928, **68**, 370–383.—A psychoanalytic interpretation of schizophrenias which are definitely related to childbirth. Premises for the conclusions arrived at were taken from the formulations made by Freud, Ferenczi, Abraham, Karen, Horney, Helene Deutsch, Jones and others.—*R. A. Young* (Boston Psychopathic Hospital).

[See also abstracts 18, 26, 46, 99, 153, 224, 375, 449, 457, 482.]

SOCIAL FUNCTIONS OF THE INDIVIDUAL

339. **Abderhalden, E. Psychoanalyse und Seelsorge.** (Psychoanalysis and pastoral work.) *Ethik*, 1928, **4**, 33–42.—Gives a summary of the answers to Abderhalden's questionnaire circulated among physicians and clergymen specially familiar with this field.—*A. Römer* (Leipzig).

340. **Allers, R. Die Unhaltbarkeit des Psychologismus in der Religionswissenschaft.** (The untenability of psychologism in the science of religion.) *Volkswohl*, 1928, **19**, 13–28.—Comments upon Freud's latest endeavor, to prove the illusionistic character of the religious. In this attempt he must fail.—*A. Römer* (Leipzig).

341. **Allport, F. H. Social psychology and human values.** *Int. J. Ethics*, 1928, **38**, 369–388.—Social psychology is looked upon as a pure science which may find application in the fields of the social sciences. The problem of the adaptation of the individual to social, political and economic institutions is the concern of the social sciences, but social psychology as a pure science is interested in observing what happens in the individual in the process of such adaptation. "The task of the social psychologist is to teach individuals to examine the ends for which they submit themselves to regulation. For the aims and ideals ascribed by officials to the family, or to business, industry, the church, or the nation, he would have them substitute the purposes of actual men and women, purposes such as each sees expressed in himself and those about him. In this way the ends of social regulation can be truly distinguished from the means, and human values brought down from 'society' and restored to the individual."—*M. Meenes* (Lehigh).

342. **[Anon.] Der Glaube des Proletariats in Deutschland und Russland.** (The creed of the proletariat in Germany and Russia.) *Evangelisches Schülblatt*, 1928, **64**, 34–37.—The results of Piechowski's questionnaire are presented in comparison with Marzinkowskij's report. There is found in the Russian soul an impulsion toward the unconditioned. Compare with these Ludwig Haas's paper, *Die Arbeiterseele und ihre Sehnsucht* (The soul of the worker and its aspiration). *Pflügschar*, 1928, **10**, 134–138.—*A. Römer* (Leipzig).

343. **Barth, —. Die Tragik Johannes des Taüfers. Eine religionspsychologische Betrachtung.** (The tragic experience of John the Baptist. A review from the standpoint of psychology of religion.) *Zsch. f. d. evangelischen Religionsunterricht an höheren Lehranstalten*, 1928, **39**, 96–101.—This paper is a contribution to knowledge of religious experience in general, especially of the doubt which becomes active after a period of religious exaltation. Thus in the case of John the Baptist there is a tragic situation; from inner conviction he acclaims Jesus with convincing voice. His internal strain is released by divine illumination. Then awakens the doubt concerning the Christ, who forsooth is living as a man.—*A. Römer* (Leipzig).

344. **Beaufays, J. Woher die Religion?** (Whence comes religion?) *Der Fels*, 1927–28, **22**, 63–71.—The high point of this discussion is the conclusion that religion is grounded in the mental-moral nature of man and attains its coronation in revelation.—*A. Römer* (Leipzig).

345. **Bergmann, —. Die katholischen Exerzitien und die evangelischen Jugendfreizeiten: ein Vergleich.** (The Catholic drills and the unconstrained times of evangelical youth: a comparison.) *Evangelischer Jugenddienst*, 1928, **5**, 61–69.—Each institution is the fruit of thought concerning deepened soul-guidance. The goal of the Catholic drills is the return of a soul to God, or asceticism. The evangelical type of piety is different; the evangelical communion is rooted in the purely human communion of youth.—*A. Römer* (Leipzig).

346. **Brühl, N. Zur Stoffwechselfrage im Falle Konnersreuth.** (On the question of assimilation in the Konnersreuth case.) *Pastor bonus*, 1928, **39**, 130–135.—The author speaks of Isenkrahe's experimental theology of 1919, with its results to the present time.—*A. Römer* (Leipzig).

347. **Cleland, H. F. Our prehistoric ancestors.** New York: Coward-McCann, 1928. Pp. xvi + 379. $5.00.—A detailed summary of the development of civilization from the Old Stone Age through the second Age of Iron.—*W. S. Hunter* (Clark).

348. **Cohen, M. Aspect et temps dans le verbe.** (Mood and tense in the verb.) *J. de psychol.*, 1927, **24**, 648–649.—"The distinction of tense is subjective, the tense being relative to the individual who is speaking, before, during, or after the word is expressed. On the contrary, other distinctions, which we call mood, concern action considered in itself without consideration of the subject speaking. . . ." —*N. L. Munn* (Clark).

349. **Crosby, J. R. Modern witches of Pennsylvania.** *J. Amer. Folklore*, 1927, **40**, 303–309.—Report of Marie Kountzik, a "professional" witch, belonging to a Russian sect called Thondrakians or Paulicians.—*J. R. Kantor* (Indiana).

350. **Damourette, J., & Pichon, E. Sur la signification psychologique de la négation en français.** (The psychological significance of negation in French.) *J. de psychol.*, 1928, **25**, 228–254.—An analysis of the various uses of negation in French literature, of which numerous examples are given. It is demonstrated that "the notion of negation is in reality absent from the thought-language of the present-day French people, but this declaration of a disagreement between linguistic logic and scholarly rational logic will have only a mediocre interest if it has not revealed . . . the existence in French of two living notions, delicate, quite rich in affect, which saturate and which surpass the domain of negation, namely disagreement and foreclosure." The authors believe that the facts of language present a great deal of interest when studied from the psychological viewpoint.—*N. L. Munn* (Clark).

351. **Debrunner, H. Welterlebnis. Das neue Werk von R. M. Holzapfel über das religiöse Leben und seine Neugestaltung.** (World experience. The new work of R. M. Holzapfel concerning the religious life and its reorganization.) *Der kleine Bund*, 1928, **9**, 180–182.—A survey of Holzapfel's first volume, which concerns the investigation of the scarcely conscious impulses out of which the religious experience develops.—*A. Römer* (Leipzig).

352. **Dennert, E. Die Krisis der Gegenwart und die kommende Kultur. Eine Einführung in die Geschichtsphilosophie Berdjajews.** (The crisis of the present time, and the coming civilization. An introduction to Berdjajew's philosophy and history.) Leipzig: Adolf Klein, 1928. Pp. 97.—Dennert sees escape from Spengler's error in Berdjajew's interpretation of history. The several civilizations ought not to be torn loose from the whole, which itself is a total organism. As to the crisis, a prominent question is that concerning the value of Christianity. However, it is not correct to identify Christianity with Western Civilization. Christianity may indeed impress its character upon a civilization; but it itself is not a civilization. Moreover, the teaching of Christ must be distinguished from that of the church. Dennert believes that when the new civilization comes from Russia it can be only Berdjajew's kind, with his new world-feeling. Berdjajew's work improves upon Spengler through the search for the deeper meaning of world history; he even gives positive guide-lines. The riddle of the inner history, of the divine history, and therewith the riddle of the fate of the world and of man, is solved by God's yearning for reciprocation of love. The miscarriage of the new history shows, not that all history is meaningless, but rather that the higher calling of man is superhistoric. Christianity must choose between anti-Christian civilization and ecclesiastic civilization with Christ-like mutation; hitherto the church has been a temple, now it must become a practical power in life.—*A. Römer* (Leipzig).

353. **Dufft, E. Heimat als religiöser Begriff.** (Home as a religious concept.) *Dorfkirche*, 1928, **4**, 153–155.—In itself, home is a natural concept; yet it has its religious value. But an anchoring of religion to the home should be emphatically rejected.—*A. Römer* (Leipzig).

354. **Dupuis, L. L'autoritarisme comme aboulie sociale.** (Authoritarianism as social abulia.). *J. de psychol.*, 1927 **24**, 731–746.—The author expresses the view that authoritarianism is a species of social abulia. He defines morbid authoritarianism as "an immediate intolerance for the spontaneity of others." It involves "an insufficiency of mental tension." The three outstanding characteristics of authoritarianism are methodism, an ascetic disposition, and covetousness, each involving "expressions of affective deficiency and the means of struggle against it, of rendering the sentiment less painful."—*N. L. Munn* (Clark).

355. **Eliasberg, W. Über sozialen Zwang und abhängige Arbeit, mit Bemerkungen über Beziehung von Psychoanalyse und Sozialwissenschaft.** (Concerning social compulsion and dependent work, with remarks concerning the relation of psychoanalysis and social science.) *Zsch. f. Völkerpsychol. u. Soziol.*, 1928, **4**, 182–195.—Author discusses conflicts between society and the individual, especially the problem of the dependent worker, from the standpoint of Freudian psychology and psychotherapy.—*J. R. Kantor* (Indiana).

356. **Fauset, A. H. Negro folk tales from the south.** *J. Amer. Folklore*, 1927, **40**, 213–303.—A series of tales under various heads (animal, fairy, exaggeration, riddles, toasts, spirituals, etc.) collected during the summer of 1925 in the states of Alabama, Louisiana and Mississippi.—*J. R. Kantor* (Indiana).

357. **Garth, T. R., Smith, H. W., & Abell, W. A study of the intelligence and achievement of full-blood Indians.** *J. Appl. Psychol.*, 1928, **12**, 511–516. —The subjects were 1000 full-blood Indians (tribes not given) in government and church schools, ages

about 12 to 18, grades 4 to 9. They were given the Otis Classification Test, Part I measuring educational achievement and Part II intelligence. All ages and quotients rise somewhat with grade; the average IQ is 70, the average accomplishment ratio 107 (range 105 to 111) which is higher than that for whites (overlapping 79%). By means of a regression equation intelligence score is predicted from age, grade, and achievement score, the respective weights being —1, 2.5, and 8; the multiple correlation is 0.84; the partial correlation between intelligence and achievement, holding age and grade constant, is 0.67. From these facts the authors conclude that there is "little room for any other factor besides school grade and achievement in education in determining intelligence score for full-blood Indians." —*R. R. Willoughby* (Clark).

358. **Hackett, J. D. Rating legislators.** *Person. J.*, 1928, **7**, 130–131.—A brief description is given of a rating scale used in 1784 for rating Irish legislators. —*A. W. Kornhauser* (Chicago).

359. **Hankins, F. H. An introduction to the study of society; an outline of primary factors and fundamental institutions.** New York: Macmillan, 1928. Pp. 773. $4.00.—*W. S. Hunter* (Clark).

360. **Heckel, R. Optische Formen und ästhetisches Erleben.** (Optical forms and esthetic experience.) In *Untersuchungen über das ästhetische Erleben,* herausgegeben von O. Kroh. Heft 1. Göttingen: Vandenhoek & Ruprecht, 1927. Pp. 104. 6m.—This research was suggested by Meumann's negative judgment regarding the esthetic capacity of children under 15 years. As test-material the author used simple esthetic forms, which the subjects were to compare and arrange in order of merit, giving reasons for their decisions. The subjects were children from 10 to 14, students and farmers. The results were evaluated by means of Spearman's rank-order correlation formula. The existence of a totalizing and an analyzing type of esthetic apprehension was revealed, and it was shown that "even in the lack of congruence between experience and linguistic expression a high degree of esthetic sensitivity is possible." Esthetic capacity is primarily determined by an original esthetic disposition which is demonstrable even before the tenth year, and secondarily by the frequency of occupation with esthetic objects. Education and intellect are not of decisive importance. On the other hand, adults whose taste is untrained have less esthetic sense than children.—*H. Jancke* (Bonn).

361. **Heilman, J. D. A revision of the Chapman-Sims socio-economic scale.** *J. Educ. Res.*, 1928, **18**, 117–126.—The revision of the scale is given along with the results for 1000 children, of whom the mental ages of 828 were also obtained. These were all 10-year-old children from 48 public schools in Denver, Colo.—*S. W. Fernberger* (Pennsylvania).

362. **Heinlein, C. P. The affective characters of the major and minor modes in music.** *J. Comp. Psychol.*, 1928, **8**, 101–142.—The ability to discriminate two pitches, varying by less than 5 d.v., is not a fundamental requirement for the musically trained to become successful performers. The correlation between the abilities of pitch and chordal discrimination is low as $+.10 \pm .12$. Only 2, of 30, subjects gave an adequate explanation of the technical difference between a major and a minor chord. Feeling-tone, of the joyful-melancholy dimension, expressed in words, furnishes the terms by which technical designations are made respecting the variations in tonal structure. Feeling-tone reactions to harmonic configurations are very variable; assumptions of an intrinsic character in the mode must, therefore, be dismissed. Fixity of feeling-tone is shown to be a matter of training, since both trained and untrained may characterize minor compositions as being happy, etc., and major compositions as being mournful, etc. Four figures, six tables, and thirty-two references.—*H. R. Crosland* (Oregon).

363. **Hughes, A. G. Jews and Gentiles.** *Eug. Rev.*, 1928, **20**, 89–94.—Children in three London elementary schools containing both Jewish and non-Jewish children were given the Northumberland Standardized Tests in intelligence, arithmetic, and English (including reading, spelling, geography, history). "The Jewish children, both boys and girls, at almost every age from 8 to 13, proved to be superior to the non-Jewish children," alike in intelligence and in school attainment. When the children were classified by the occupational groups to which their fathers belonged, Jewish children showed a superiority over non-Jewish children in corresponding categories of 6 to 10 "mental ratio" points in most categories. In a fourth school in a poor district, the "poorest" Jewish children were found to be "so far superior to the poorest non-Jewish children as to be practically equal to the general non-Jewish average."—*B. S. Burks* (Stanford).

364. **Jespersen, O. L'individu et la communauté linguistique.** (The individual and the linguistic community.) *J. de psychol.*, 1927, **24**, 573–590.—While heredity fixes the organs of speech and the capacities correlated with its acquisition, "we cannot claim that this structure of organs predisposes the child to a certain manner of pronunciation." There is a discussion of various racial characteristics and of the readiness with which new languages are acquired with a change of linguistic environment. "The linguistic history of each individual is the history of his socialization; the small child starts by speaking language, a language of his own that nobody can understand, and passes to an imitation, at first very defective, of his mother; an imitation in which only parents and elder brothers and sisters can guess what he desires to imitate, and guess it only because of an extreme benevolence. From time to time imitation becomes less defective, and little by little the child learns better to conform to the habits of others. . . . Changes which slip into language are always in the last analysis caused by individuals, and if an individual can influence language which after all appertains to the whole nation, it is merely because man is a social animal."—*N. L. Munn* (Clark).

365. **Jung, E. Götter, Heilige und Unholde. Archäologische Beiträge zur deutschen Glaubens-**

und Rechtsgeschichte. (Gods, saints and demons. Archeological contributions to the history of German beliefs and customs.) *Mannus. Zsch. f. Vorgesch.*, 1928, **20**, 118–161.—This article is evidently a partial abstract of a book by the same author called *German Gods and Heroes*, published in Munich. The 39 illustrations of ancient statues, basreliefs, paintings and cairns are reproduced from the book. Jung gives interpretations of the developments of ancient religious conceptions and their change and adaptation under Christianity as shown in this primitive art.—*E. A. Gaw* (Ohio State).

366. **Kryzhanovsky, I. I. The biological bases of the evolution of music.** New York: Oxford, 1928. Pp. iv + 59. $1.20.—The author aims "to prove that the laws governing the movement of musical evolutions are the very biological laws which control the evolution of the whole world" (p. 41). The essay is devoted, however, to a restatement of the most elementary facts of the science of musical sounds and the development of musical form, in the course of which recital the author makes statements such as: "We can distinguish a note with 1,000 vibrations from one with 1,000.5 vibrations" (p. 8). The author occasionally uses the terms adaptation, variation, etc. The conditioned reflex is pressed into service as explaining the resolution of dissonances. The author's conception of the conditioned reflex is as follows: "Light falling on the eyes always causes a contraction of the pupils; irritation of the mucous membrane of the mouth by food substances is followed by secretion of the saliva. These are conditional reflexes. . . . If we sound the note C and a minute later give meat to the dog, there will be a conditional reflex; as soon as the dog hears that note its saliva will be secreted—the conditional reflex has taken place" (pp. 29–30). Chord resolutions are governed by conditioned reflexes. "A connexion is established between the dissonance and the resolving consonance which follows it. This connection is conditional—it may be destroyed and replaced by another" (p. 30).—*M. Schoen* (Carnegie Institute of Technology).

367. **Lalo, C. Sur la psychologie comparée de l'artiste, de l'amateur et du public.** (The comparative psychology of artist, *amateur*, and public.) *J. de psychol.*, 1927, **24**,, 323–340.—5 different relations exist between every work of art and the inner life of its creator. These are: "diversion or play (Flaubert's type); immunization or purgation (Goethe's type); improvement (Rousseau's type); technical activity, 'art for art's sake' (Goncourt's type); reiteration or conformity (Stendhal's type)." They may exist in turn, or simultaneously, in the life of the artist, the individual consciousness of the *amateur*, and in the collective consciousness of the public. "Most often," Lalo says, "art only transforms its environment after having been produced by it." Both in groups and in individuals conformity is most often studied, yet it may be the most superficial of the types. There is a well illustrated discussion of the various types of art which have been produced, the personality of their creators, and the attitude of those who came under their influence. The author lays special emphasis upon the influence of the *milieu* in bringing about changing esthetic values.—*N. L. Munn* (Clark).

368. **Lalo, C. La science générale de l'art.** (The general science of art.) *J. de psychol.*, 1928, **25**, 193–227.—Esthetics is scarcely comprehensive enough justly to consider art, which surpasses the former realm at many points. Esthetics is inseparably bound to religious, national, and racial conceptions, and can consider art only under the shadow of these influences, thereby perpetrating a gross injustice. Hence the need for a general science of art which will consider it from every aspect, psychological, anthropological, ethical, etc. The heterogeneous values, disproportions, rivalries of social and hostile classes, divergent interpretations of a specific work, polyrhythmic evolution, and the pure and synthetic values in art, are each discussed from the new viewpoint.—*N. L. Munn* (Clark).

369. **Landry, L. La représentation spatiale de la musique.** (Spatial representation of music.) *J. de psychol.*, 1927, **24**, 928–938.—A critique of an article, *L'algorithme musical*, by Sourian in the *Revue philosophique* for October 1927, in which the latter developed a mathematical representation of music. The criticism is that music rests upon an esthetic basis and is not susceptible to numerical calculations. "Arithmetically or geometrically, spatial representation can give only a false idea of music." —*N. L. Munn* (Clark).

370. **Lesemann, G. Vor welche Aufgaben stellt uns die Kriminalität unserer Hilfsschüler?** (What are the problems ráised by the criminal attitude of our correctional school pupils?) *Hilfsschule*, 1928, **1**, 308–322.—The author shows at the beginning that in the case of the feeble-minded much more than with normal children there is an incompatibility between their own volition and what the law demands. Subordination to the law assumes intelligence and will to be developed to a definite extent. Since feeblemindedness is a defect of intelligence, the feebleminded naturally fail easily in moral issues, and this explains the large number of defective delinquents. According to the juvenile law of February 16, 1923, pedagogical measures may be substituted for imprisonment. As a correctional pedagogue, Lesemann asks, however, that the pedagogical measures shall become the rule and punishment the exception. The author does not consider that the efforts of the "Organization to prevent juveniles from committing punishable offenses" are sufficient to solve the problem. The desire to obey the law does not necessarily follow from a knowledge of the law (p. 313). Lesemann demands a complete reorganization of the correctional school into a community school. More particularly he specifies the elaboration of abstract generally recognized fundamental ethical principles, omitting the purely conventional elements. In religious instruction he wants to emphasize the rough-and-ready ethics of the average man. He also desires to reduce over-suggestibility by means of orthopedic exercises of the will. He wants the cooperation of the parents and the development of bureaus of educational guidance. Further sugges-

tions of the author are for the development of state institutions for feeble-minded with criminal tendencies, the training of juvenile court judges, as well as jurors, in psychopathology, and the increased utilization of correctional school teachers as jurors in the juvenile courts.—*O. Seeling* (Berlin).

371. **Lilje, H. Gewissheit des Glaubens.** (The certainty of faith.) *Mitteilungen z. Förderung einer deutschen christlichen Studentenbewegung,* 1927, 332, 54–57.—The author treats the certainty of faith from the following points of view: uniqueness, richness of content, reality. The distinguishing feature is not "psychological salvation." The certainty of faith begins when the fear concerning our remoteness from God overwhelms us.—*A. Römer* (Leipzig).

372. **Liljeqvist, P. E. Rudolf Ottos "Das Heilige." Einige Randbemerkungen.** (Rudolf Otto's "The Holy." Some marginal notes.) *Grundwissenschaft,* 8, 249–268.—Treats the irrational in the idea of the divine, and its relation to the rational, also the religious *a priori.*—*A. Römer* (Leipzig).

373. **Luquet, G. H. Le réalisme intellectuel dans l'art primitif. I. Figuration de l'invisible.** (Intellectual realism in primitive art. I. Figuration of the invisible.) *J. de psychol.,* 1927, 24, 765–797.—Primitive art is defined as "that which, in the rendition of forms, whatever the artist's age or environment may be, is guided by the same conception of figurative art, by following resemblance, as our children when they draw naturally, and by which they differ from the adult." In his discussion of various types of primitive art the author points out that there is a representation, in pictures of animals and humans especially, of aspects which are unseen yet deemed indispensable by the artist. The body is often transparent, lungs, heart, etc., being thus included in the figure. Houses are likewise represented as transparent, the interior occurring in the same figure. Another tendency is that of drawing each part of an object as an entity, then assembling these parts. "The drawing of an object presents for visual realism an image of indecomposable unity, for intellectual realism a grouping of independent ideas." The primitive artist, by representing the invisible and by accentuating essential aspects of the object, tries to make his rendition recognizable and well understood. There is specific reference to each of the works discussed as well as exhaustive bibliographical notes.—*N. L. Munn* (Clark).

374. **Luquet, G. H. Le réalisme intellectuel dans l'art primitive. II. Le rendu du visible.** (Intellectual realism in primitive art. II. Rendition of the visible.) *J. de psychol.,* 1927, 24, 888–927.—A continuation, illustrated with 52 figures, of the author's previous discussion of primitive art. In the representation of natural objects there is an attempt to picture all of the important parts such as eyes, nose, sex organs, etc., even though these may not appear in the visual aspect of the object. "The intellectual characteristics of one part of an object comprise not only its essential form, but also its topographical relations with the neighboring parts of the same object; intellectual realism desires to express these relations so far as it is possible without sacrificing exemplarity." This is especially outstanding in landscapes and representations of large numbers of objects. "The representation of invisible elements of nature, suppression, exemplarity and its corollaries: transparence, detachment and displacement of parts of the same object, stratification of levels, mixing of points of view, appear . . . to be but varied expressions of the same fundamental tendency, intellectual realism, which is equally prominent under the same forms in the drawings of our children. For that reason this type of art merits well the name of primitive art." Luquet claims that the methods of reproduction pointed out by him "are encountered in species too numerous and emanate from regions and epochs too diverse to explain their concordance by chance." Hence they undoubtedly reflect the mentality of primitive beings, placing them, in this respect at least, on the level of children.—*N. L. Munn* (Clark).

375. **Macfall, C. M. William Edward Hickman, a personality study.** *Med. J. & Rec.,* 5, 6; 245–248, 304–308.—After a lengthy examination of the personal history of the culprit, the author concludes that he is suffering from "a periodic or circular type of insanity, probably of the mixed type of dementia precox."—*R. C. Givler* (Tufts).

376. **Marcuse, M. Schuld und Zurechnungsfähigkeit.** (Guilt and responsibility.) *Zsch. f. Sexwiss.,* 1928, 14, 428.—*A. Römer* (Leipzig).

377. **Marouzeau, J. Le parler des gens moyens. Interdictions des convenances et tabou du sentiment.** (The speech of average people. Interdictions of propriety and taboo of opinion.) *J. de psychol.,* 1927, 24, 611–617.—Changes in language result from an adaptation between two contradictory tendencies; "the conservative action of a cultivated minority and the innovating action of a cultureless majority". Interdictions of the taboo type, comparable to those existing in primitive societies, are believed by the author to be behind the linguistic phenomena of civilized peoples.—*N. L. Munn* (Clark).

378. **Mead, M. Coming of age in Samoa.** New York: Morrow, 1928. Pp. xv + 297. $3.00.—This book by the assistant curator of ethnology in the American Museum of Natural History is based upon a nine months' study of adolescent and near-adolescent girls living in three villages on the west coast of Taũ in the Manu'a Archipelago. "I spent more time in the games of children than in the councils of their elders. Speaking their language, eating their food, sitting barefoot and cross-legged upon the pebbly floor, I did my best to minimize the differences between us and to learn to know and understand all the girls of three little villages. . . ." Chief emphasis is placed upon the study of 50 girls of whom 14 were near puberty, 12–15 years of age, and 25 were past puberty, 14–20 years of age. The chief problem which the author put herself was this: "Are the disturbances which vex our adolescents due to the nature of adolescence itself or to the civilization?" The Samoan adolescent girl is markedly free from

conflicts as a result of many factors, among which the following may be listed: (1) the type of family organization, which enables the child to escape from over-strict discipline in any one group; (2) the free experimentation in sexual activities which is permitted; (3) the wide acquaintance with problems of life and death which the child gets in observing birth, miscarriage, intercourse, and Caesarian operations; (4) the disinclination to pry into motives; (5) the recognition of the essential impersonality of sex attraction; and (6) "the general educational concept which disapproves of precocity and coddles the slow, the laggard, the inept." The material of the book is organized under the following chief topics: the education of the Samoan child; the Samoan household; the girl and her age group; the girl in the community; formal sex relations; the rôle of the dance; the attitude towards personality; the experience and individuality of the average girl; the girl in conflict; maturity and old age; and educational implications. The appendix supplies certain technical details, particularly on the use of intelligence tests in the Samoan language. A foreword to the book has been written by Franz Boas.—*W. S. Hunter* (Clark).

379. **Michelson, T. Notes on the buffalo-head dance of the Thunder gens of the Fox Indians.** Washington: Gov't Printing Office, 1928. Pp. 99. $0.65.—*W. S. Hunter* (Clark).

380. **Mitzka, F. Die Glaubenskrise im Seelenleben.** (The doctrinal crisis in the spiritual life.) Innsbruck: Verl. Tyrolia, 1928. Pp. 60. M. 8.—Mitzka distinguishes the following forms of the religious crisis: pathological doubt, the doubt of the developmental years, purely intellectual doubt, religious doubt (in opposition to certain forms of the cult, etc.), ethical doubt in regard to doctrine, emotional doubt, nihilistic doubt, latent crisis in belief. There follows an account of doctrinal doubt in its relation to logical thought and to moral life from the Catholic standpoint.—*A. Römer* (Leipzig).

381. **Molden, B. Ist Religion in Zukunft möglich?** (Will religion be possible in the future?) Leipzig, Wien: Perles, 1928. Pp. 170. M. 4.80.—When the scientific world-view, which is now suspended in air, has been harmoniously completed by a consummate grasp of phenomena, then we shall attain to the religion of the future, namely, a religious-philosophical conviction.—*A. Römer* (Leipzig).

382. **Müller, W. Vom irdischen zum kosmischen Gottessohn.** (From the mundane to the cosmic son of God.) Duisberg: Ewich, 1928. M. 1.20.—Religious developments hitherto have clung to the pre-Copernican stage of knowledge. Belief in an evolving God will bring to religious persons a cosmic breadth of view.—*A. Römer* (Leipzig).

383. **Nelson, W. S. Der amerikanischer Neger und das Christentum.** (The American negro and Christianity.) *Die Sphäre,* 1928, **9**, 106–114.—Gives a psychology of the negro. Points out the difficulties which arise from the strikingly unchristian behavior of white Christians.—*A. Römer* (Leipzig).

384. **Newe, H. Die religiöse Gotteserkenntnis und ihr Verhältnis zur metaphysischen bei Max Scheler.** (The religious knowledge of God and its relation to the metaphysical in the thought of Max Scheler.) Wurzurg: Becker, 1928. Pp. 154. M. 3.30.—In this study, Newe has made use of all Scheler's publications. Since there is no continuous development in Scheler's thought, the formulation of a theory was not easy. In broad outline, Newe treats the historical and systematic epistemological foundations. According to Scheler, the religious apprehension of God signified both an immediate discernment of values or essence and a knowledge of existence. In Scheler are found formal-axiomatic determinations and a rational vindication of the religious knowledge of God. It cannot be said that there is a strictly metaphysical knowledge of God in the thought of Scheler.—*A. Römer* (Leipzig).

385. **Orebaugh, C. A. The new criminology.** *Welfare Mag.,* 1928, **19**, 1039–1046.—The efficacy of the traditional criminal procedure based upon retaliation and capital punishment is questioned, and a system emphasizing the preventive, diagnostic and rehabilitative possibilities is urged.—*L. Ackerson* (Institute for Juvenile Research).

386. **Parshley, H. M. Science and good behavior.** Indianapolis: Bobbs-Merrill, 1928. $2.50.—*W. S. Hunter* (Clark).

387. **Pfliegler, M. Die religiöse Entwicklung und Erziehung des Jugendlichen.** (The religious development and training of the young.) *Der Seelsorger,* 1928, **4**, 69–77.—*A. Römer* (Leipzig).

388. **Pitkin, W. B. The twilight of the American mind.** New York: Simon & Schuster, 1928. Pp. xviii + 356. $3.00.—Defining Best Minds as those ranking in the highest 1% in a comprehensive series of intelligence tests given to the present population (a rank equivalent to a Stanford-Binet IQ of 130 or above), Pitkin opposes the eugenists' cry that the proportion of such minds in the general population should be increased. His reason is that society could find no place for them. He starts with the propositions that modern industrial management requires that no job be given to any man if another man of lesser ability can do it equally well; and that a man is a social misfit, blocked and thwarted, if he finds no adequate outlet for his strongest native capacities. Running the gamut of modern occupations, he finds only 175,000 jobs in America requiring Best Minds; whereas there are 613,800 such minds between 22 and 65 years of age. The situation is nearly as acute for all minds appreciably above the average. The present trend of organization, making it possible for a Best Mind to direct millions, will reduce the number of positions still further.—*W. Dennis* (Ohio State).

389. **Poertner, B. Bilder aus dem religiösen Seelenleben katholischer Frontsoldaten.** (Pictures from the religious experiences of Catholic soldiers at the front.) *Gelbe Hefte,* 1928, **4**, 219–231.—Elaborations based upon field-post letters.—*A. Römer* (Leipzig).

390. **Pohl, W. De vera religione quaestiones selectae. Tractatus de fundamentis religionis generatim spectatae, de religione generatim spectata, de revelatione generatim spectata.** (Selected ques-

tions concerning true religion. Tractate on the fundamentals of religion considered in general, on religion considered in general, on revelation considered in general.) Freiburg i. Br.: Herder, 1928. Pp. xx + 338. M. 9, geb. 10.50.—This presentation of the foundation of religion is intended to prove the truth of the Catholic faith. The author connects his work with the results of investigations in the psychology and history of religion, especially those of Andrew Lang and W. Schmidt. In the first part, the orthodox conception of God is defended against materialism, pantheism, criticism, and empiricism. In the last part the Catholic conception of revelation is contrasted with the positions arrived at from *a priori* philosophical suppositions.—*A. Römer* (Leipzig).

391. **Prinzhorn, H. Das Problem der Führung und die Psychoanalyse.** (The problem of guidance and psychoanalysis.) *Akademie gemeinnuss. Wissenschaften zu Erfurt, Abt. f. Erziehungswissenschaft u. Jugendkunde.* Veröffentlichungen Nr. 14. Erfurt: Stenger, 1928. M. 1.50.—*W. S. Hunter* (Clark).

392. **Renaud, E. B. L'antiquité de l'homme dans l'Amérique du Nord.** (The antiquity of man in North America.) *L'Anthrop.,* 1928, **38**, 23–49.—A review of discoveries, in various parts of the western plains of this country, which are under consideration as indicating the existence of man as far back as the Pliocene age. Although the author apparently is impressed with the evidence he defers final judgment pending study now in progress at the American Museum.—*L. T. Spencer* (Yale).

393. **Richstätter, K. Der "Vater der christlichen Mystik" und sein verhängnisvoller Einfluss.** (The "father of Christian mysticism" and his fateful influence.) *Stimmen der Zeit,* 1927, **58**, 241–259.—This refers, of course, to Dionysius the Areopagite. His influence extends into the middle of the 17th century. It concerns the Monophysite heresy. The secret of supernatural grace meets with no comprehension in non-Christian mysticism.—*A. Römer* (Leipzig).

394. **Roberts, H. Louisiana superstitions.** *J. Amer. Folklore,* 1927, **40**, 144–208.—A collection under various heads (marriage, divination, cures, etc.) of 1,585 superstitions from the parish of Iberia in southwestern Louisiana.—*J. R. Kantor* (Indiana).

395. **Römer, A. Der Wille und das religiöse Erleben.** (The will and religious experience.) *Der Geisteskampf der Gegenwart,* 1928, **64**, 148–151.—Appreciation of Pfennigsdorf's standpoint, which emphasizes the will, in so far as it is a reasonable voluntarism which does not overlook the other functions.—*A. Römer* (Leipzig).

396. **Römer, A. Der idealistische Unterton in der Basis des Heilsverlangens.** (The idealistic undertone in the basis of the desire for salvation.) *Neues sachsisches Kirchenbl.,* 1928, **35**, 225–230.—A restrained idealism as the beginning of a preparation for Christianity is indispensable. A further development into a desire for salvation is therefore possible without detriment to what is supreme in special Christian experience.—*A. Römer* (Leipzig).

397. **Römer, A. Glaubensbereitschaft und Anbetung.** (Readiness to believe and worship.) *Monatssch. f. Gottesdienst u. kirchliche Kunste,* 1928, **3**, 85–92.—Investigates, from the standpoint of religious psychology, the types of church service and their value for various types of men, especially for the average city-dweller of the present day.—*A. Römer* (Leipzig).

398. **Römer, A. Grundfragen des Glaubens (im besonderen Hinblick auf den nachdenklichen Typus.)** (Fundamental questions concerning belief, with special consideration of the reflective type.) Leipzig: Klein, 1928. Pp. 29. M. 90.—The author is looking for the origin of faith and tries to find some such basis in human nature. Duly considering the individual functions in their significance for religious life, he finds such basis in the special evaluation which rests upon man's conscious will to meaning even when he is shaken by the problems of life. (Cf. *Neues Sächsische Kirchenblatt,* 1928, 225 ff.) The whole meaning of faith is unmistakably proved to us in the world of activity insofar as it is related to the problems of life. Especially in regard to modern men it seems necessary to grant the validity of free confession, and, in view of the narrowed horizon, the continual unravelling of this problem. The author therefore aims in general at the religious assurance of a view which is antecedent to the factual basis, i.e., the transcendental view-point. From this point of view we find the striving for meaning in the facts related to the striving for meaning in the human structure. Finally the author makes a transition to the specifically Christian faith in such a manner that it seems acceptable to the reflective critical type who must be reminded of the meaning of Christianity. This essay is primarily addressed to cultured people who are out of sympathy with the Christian faith.—*A. Römer* (Leipzig).

399. **Ruiz-Funes, M. Criminalità e endocrinologia.** (Crime and endocrinology.) *Riv. di psicol.,* 1928, **24**, 73–97.—A discussion of the relation of crime to the delinquent. The author's contention is that the endocrine mechanisms considered both morphologically and functionally cannot explain all crime; the predispositions of the individual have to be studied. An historical review is included of material on endocrinology in its relation to morphology, psychopathology, abnormal psychology, crime and sex delinquency. In conclusion the writer states that delinquency is an extremely complex phenomenon, to remedy which both the medical and the judicial influences must play a cooperative rôle.—*T. M. Abel* (Illinois).

400. **Russell, B. Sceptical essays.** New York: Norton, 1928. Pp. 256. $2.50.—In seventeen essays the author discusses various topics in social psychology and political theory. The rôle of creeds and propaganda in social changes is set forth. Throughout the book a plea is made for the spread of the scientific temper.—*W. S. Hunter* (Clark).

401. **Seashore, C. E. A base for the approach to quantitative studies in the esthetics of music.** *Amer. J. Psychol.*, 1927, **39**, 141–144.—A base or zero line for measurements in esthetics of music may be derived from the assumption that beauty in music consists in artistic deviation of the regular, the rigid or the fixed in each attribute of sound. Since everything that is conveyed from singer or player to listener is conveyed on the sound wave, and since the latter can be accurately recorded and measured, esthetic effects can be stated in terms of deviations in the frequency, amplitude, duration and form of the wave. The application of these principles is shown in the study of the vibrato.—*G. J. Rich* (Bellevue Hospital).

402. **Spier, L. A note on reputed ancient artifacts from Frederick, Oklahoma.** *Science*, 1928, **68**, 184.—*G. J. Rich* (Bellevue Hospital).

403. **Stange, C. Die Eigenart der christlichen Gotteserkenntnis.** (The distinctive character of the Christian knowledge of God.) *Zsch. f. systematische Theologie*, 1927, **5**, 347–370.—Non-Christian knowledge of God bears a profane character; in it consciousness of self determines the consciousness of God. Christian knowledge of God is prophetic; in it the consciousness of God determines the consciousness of self.—*A. Römer* (Leipzig).

404. **Storck, J. Man and civilization: an inquiry into the bases of contemporary life.** New York: Harcourt, Brace, 1928. Pp. v + 449.—Third revised edition. No changes.—*M. P. Montgomery* (Faribault, Minn.).

405. **[Various.] Vergleichende Untersuchungen zur Psychologie, Typologie, und Pädagogik des ästhetischen Erlebens.** (Comparative studies on the psychology, typology and pedagogy of the esthetic experience.) Göttingen: Bandenhoeck & Ruprecht. —*W. S. Hunter* (Clark).

406. **Voipo, A. Ueber ekstatisches Predigertum in Finnland.** (The ecstatic priesthood in Finland.) *Die Christliche Welt*, 1928, **41**, 1171.—*A. Römer* (Leipzig).

407. **von Tiling, M. Der religiöse Mensch nach Spranger.** (The religious person according to Spranger.) *Schule u. Evangelium*, 1928, **2**, 304–310. —What Spranger teaches concerning religion has "nothing whatever to do" with Christian faith.—*A. Römer* (Leipzig).

408. **Weber, C. O. Pseudo-science and the problem of criminal responsibility.** *J. Crim. Law & Crimin.*, 1928, **19**, 181–195.—A philosophical defense of the traditional attitude toward criminal offenders, and a criticism of the most modern criminology. The author disputes the alleged failure of punitive justice and sees in it great efficacy as a deterrent. It works through pain, which Weber believes is the only teacher and, in one or another of its modulated forms, the ultimate stimulus to every thought. Even for the feeble-minded pain is effective, for since he cannot reason, pain is the only deterrent for him. Finally the author resolves the problem into the issue of vitalism versus determinism, identifying with the former the underlying logic of traditional punitive measures, and with the latter the rationalizations of ultra-modern criminology. Introspection reveals the universal experience of choice and effort. This truth precludes the possibility of consummate determinism in behavior, except among rare abnormals who suffer the malady recognized by White and others as "depersonalization," and among deterministic psychologists who are "prejudiced exceptions to the universal subjective awareness of freedom." Through a vigorous dialectic route the writer comes to a resting point between the two philosophies. In the case of the individual offender the problem must be solved for the particular case: "Were the precipitating factors too strong or was the will too weak?"—*H. Wilinsky* (Judge Baker Foundation).

409. **Willard, E. B. The Romany trail—a menace.** *Welfare Mag.*, 1928, **19**, 1047–1052.—"There never was any sound reason why the gypsy should be tolerated in a civilized community or why he should be treated differently than any other social parasite."—*L. Ackerson* (Institute for Juvenile Research).

410. **Willwoll, A. Zur Psychologie des religiösen Lebens.** (Psychology of the religious life.) *Schweizerische Rundschau*, 1928, **27**, 1040.—*A. Römer* (Leipzig).

411. **Yasser, J. Decitones—centitones—millitones.** *Pro Musica*, 1928, **6**, 12–24.—There have been several attempts in sound and music to develop a basic measuring interval. Two of these are considered important: (1) John Herschel (1792–1871) divided the octave into one thousand aproximately equal units. (2) A. J. Ellis (1814–1890) divided the tempered semitone into one hundred parts called cents. The author, Yasser, modifies the Ellis procedure by dividing up the tone instead of the semitone. The tenth part is termed the decitone, the hundredth the centitone, and the thousandth the millitone. It is also pointed out that musicians in attempting cadenzas, recitatives, etc., frequently deviate toward the just intonation. When this occurs, the effect produced depends upon the accompaniment. If the soloist's tone on the just intoned scale happens to be accompanied by the same tone on the evenly tempered scale, the effect is usually bad. However, the just intoned solo tone may be accompanied by a piano tone which is the same on both just intoned and tempered scales. Such a condition will probably create a very favorable impression.—*P. R. Farnsworth* (Stanford).

[See also abstracts 2, 4, 6, 7, 31, 72, 166, 217, 240, 248, 254, 264, 271, 304, 308, 421, 448, 449, 452, 453, 498.]

INDUSTRIAL AND PERSONNEL PROBLEMS

412. **Bauermann, H. Ein Beitrag zur Frage der individuellen Verschiedenheiten im Bedienen von Werkzeugmaschinen.** (A contribution to the question of individual differences in the running of machinery.) *Psychotechn. Zsch.*, 1928, **3**, 87–98.—The work of various individuals on a drill is examined by means of Poppelreuter's stopwatch analysis. As a result it is found that there are great differences

in individual performance. This is very important in the selection and training of new men and the determination of structural formations. There is a theoretic section of the book which indicates how the concept of an accurate test of individual performance can be developed and how several analytical methods and their results can be utilized. The book closes with a detailed presentation of the experimental results, documented by many graphs and individual figures.—*F. Giese* (Stuttgart).

413. **Bingham, W. V. Metodi non tenuti in valore nella psicologia dell' impiego.** (Methods not considered valuable in the psychology of employment.) *Riv. di psicol.*, 1928, **24**, 1–6.—A brief review and criticism of methods used in employment selection in America, chiefly of the methods employed in getting at the attitudes and temperament of the workers.—*T. M. Abel* (Illinois).

414. **Bültmann, W. Psychotechnische Berufseignungsprüfung von Giessereifacharbeitern.** (Psychotechnical vocational aptitude tests for foundrymen.) *Indus. Psychotechn.*, 1927, **4**, 161–173.—An analysis of foundry work and the characteristics it requires is followed by a description of twelve tests for foundry occupations. The tests are for muscular control, strength, ability to judge the color of a glowing wire, sensitivity to heat, spatial thinking, etc. Test scores correlated closely with ratings of small groups of apprentice molders. The coefficients were .98, .83, .75.—*A. W. Kornhauser* (Chicago).

415. **Bureau of Public Personnel Administration Staff. Information and data regarding tests in the short-answer form.** *Pub. Person. Stud.*, 1928, **6**, 194–196.—(1) Army Alpha Scores for various occupational groups; distributions, mean and median scores for Milwaukee city service employees by occupations. Library staff scores are highest, park policemen lowest. (2) Tests for motor vehicle inspector; distribution, mean and median scores for 429 New Jersey candidates for appointments. Skewed distribution indicates that tests contain too many easy items. (3) Tests for statistician; data from 40 students at George Washington University near the end of a graduate course in statistics. Distribution shows that previous tentative standards assumed an easier test than is the case. (4) Abstract intelligence of patrolmen and its relation to success on the job; tests and ratings on 52 patrolmen in a typical city. When rated by supervisors into the best, middle and poorest thirds in efficiency all degrees of intelligence are found represented in each third. The highest scores are among the middle third. Although the median scores correlate directly with the order of thirds, no clear-cut differences in intelligence are evident in the groupings.—*K. M. Cowdery* (Stanford).

416. **Bureau of Public Personnel Administration Staff. Suggested tests for addressograph operator.** *Pub. Person. Stud.*, 1928, **6**, 197–201.—Designed for rating candidates for employment in terms of efficiency in handling addressograph machines and auxiliary equipment and in ability to do general clerical work, the tests suggested include: (1) memory for oral directions tested by means of short answers to oral questions and the following of brief oral directions; (2) short-answer items about machines, procedure and operating practices; (3) mechanical ability measured by the Stenquist Mechanical Ability Test 1; (4) clerical ability by use of the B. P. P. A. tests for junior clerk; and (5) education and employment record. Except for the Stenquist and junior clerk tests the material is as yet unstandardized.—*K. M. Cowdery* (Stanford).

417. **Couvé, R. Anlernung im Eisenbahndienst.** (Training in the railway service.) *Indus. Psychotechn.*, 1927, **4**, 147–158.—The writer briefly describes improved methods that have been adopted for training, and testing during training, in various kinds of railroad work: the work of station guards, the issuing of tickets, alphabetizing, operating signals, registration of freight trains, remembering people, and operating locomotives.—*A. W. Kornhauser* (Chicago).

418. **Dickinson, Z. C. Suggestion systems compared.** *Person. J.*, 1928, **7**, 12–17.—A brief account is given of material reported earlier (see II: 207), with some additional comments on the statistical questions involved.—*A. W. Kornhauser* (Chicago).

419. **Ferrari, C. A. Fatica individuale e fatica collettiva.** (Individual fatigue and collective fatigue.) *Riv. di psicol.*, 1928, **24**, 43–46.—This article reveals the fatigue curve of a rather small group of factory workers. The curve was found to be very similar to the ergographic curve.—*T. M. Abel* (Illinois).

420. **Gaw, E. A. Occupational interests of college women.** *Person. J.*, 1928, **7**, 111–114.—The Freyd occupational interest blank for women was given to 191 freshmen at Mills College in 1925, and in the following year to 105 of these who remained in college as sophomores. A great similarity of interests was found between the freshmen of 1925 and the same group when sophomores in 1926. The correlation between average group attitudes with regard to the occupations is close to 1.00. The correlation between individual interests in specific occupations in two consecutive years varies greatly with the occupation but centers about .50.—*A. W. Kornhauser* (Chicago).

421. **Giese, F. Psychologie der Arbeitshand.** (Psychology of the working hand.) Berlin-Wien: Urban & Schwarzenberg, 1928. Pp. 320.—The author distinguishes between the "working hand" and the "artistic hand." By the first he means the worker's hand, and by the second a hand which represents rather than creates. He has collected for both types a mass of material from rather inaccessible sources from many countries. This was to bring together the previous investigations from a methodological viewpoint. The book is illustrated by many pictures and documented by other supplementary material. The author represents the "working hand" and introduces a series of new concepts which are very important in the understanding of it. He considers the hand as an organ in craftsman-

ship, industry, pedagogy and sport. He also treats it from the point of view of developmental psychology, comparing chimpanzees, children, adults and seniles. He mentions the cripple's hand and the construction of protheses in cases of accident, victims of war and the therapeutics of diseased hands. The "artistic hand" is considered in relation to the dramatic and the plastic arts and the dance. It is further treated as an object of parapsychology, criminology and healing, and as the instrument of the blind, the deaf-mute and the blind deaf-mute. An index facilitates the location of the important findings, which is all the more essential since no similar treatment of the hand as yet exists in psychological literature.—*B. Hirschfeld* (Berlin-Lichterfelde).

422. **Häbich, T. Farbenblindheit und Berufstauglichkeit.** (Color-blindness and vocational fitness.) *Indus. Psychotechn.*, 1927, 4, 249–251.—The author emphasizes the vocational importance of color-blindness.—*A. W. Kornhauser* (Chicago).

423. **Hall, M. Die Schrifturteilung als Methode der Berufsauslese.** (Judgment of handwriting as a method of vocational guidance.) *Psychotechn. Zsch.*, 1928, 3, 65–80.—The author gathers quantitative judgments by means of questionnaires sent out to vocational teachers and business men. The qualitative judgments of the experts regarding vocational aptitude led to results which were valuable and in agreement with each other. These results supplement those of a purely experimental group. The graphological judgment, the judgment of vocational teachers and that of practical business men follow the norms $g = 0.86$ and $g = 0.93$ respectively. For methodological reasons the identity of the judges is not given.—*F. Giese* (Stuttgart).

424. **Kitson, H. D., & Keys, N. Does it pay to change jobs?** *Person. J.*, 1928, 7, 33–37.—A study was made of the vocational histories of 170 high-grade male clerical workers, 20 to 31 years of age inclusive. The number of months they stayed on each of their last jobs was compared with the salary they earned on their last position. First computations showed a low correlation (0.23) between length of service record and salary. With the age factor held constant, however, this correlation is reduced to .04. The authors conclude that increase in earning power is likely to depend on such factors as intelligence, initiative, local opportunity and the like, rather than on mere time-serving.—*A. W. Kornhauser* (Chicago).

425. **Köhler, O. Über den Gruppenwirkungsgrad der menschlichen Körperarbeit und die Bedingung optimaler Kollektivkraftreaktion.** (Group efficiency in physical work and the condition of optimal collective strength reaction.) *Indus. Psychotechn.*, 1927, 4, 209–226.—In the performance of short tasks dependent on strength, the greater the number of individuals working together the less the performance of each. This conclusion is based upon experiments in which the strength of individuals and of teams (from 2 to 12 persons) was measured by the dynamometer. Similar results are cited with regard to horses, boat crews, and industrial workers. On the basis of more elaborate experiments with individual and group weight-lifting and crank-turning, the author concludes that in tasks of longer duration (the subjects worked to the limit of their capacity) team performance depends upon the relative strength of the individuals in the team. The optimal condition for two workers is where their relative strengths are in the ratio of about 3:4. Where the two are of equal strength their joint performance is less than their individual performance added. Bibliography of 71 titles.—*A. W. Kornhauser* (Chicago).

426. **Lahy, J. M. Méthode de mise au point et d'étalonnage d'un test d'aptitude professionelle: le test du tourneur.** (Method of selecting and standardizing a test of professional aptitude: the test for lathe operators.) *J. de psychol.*, 1927, 24, 356–369.—An apparatus was developed which has characteristics similar to those of a lathe. This was tried out on 3 subjects whose psychological dispositions had been rated by psychological tests. The results coincided almost exactly. 10 lathe operators, 5 expert and 5 poor, were then subjected to the test, with the result that they maintained the same rating as that which had been given to them by their employers. The final scaling of the test was based upon results obtained from 100 apprentices. Lahy emphasizes the point that this test involves only one aspect of the trade in question, and must be used with tests which take into consideration the person's ability to read a plan.—*N. L. Munn* (Clark).

427. **Li, C. A summer in the Ford works.** *Person. J.*, 1928, 7, 18–32.—The author describes his experiences and observations while a worker in the plants of the Ford Motor Company. He discusses the labor policies in operation, the problems of speed and repetitive work, and "how the average Ford workman lives."—*A. W. Kornhauser* (Chicago).

428. **Lipmann, O. The human factor in production.** *Person. J.*, 1928, 7, 87–95; *J. de psychol.*, 1928, 25, 19–30.—The trends of industrial mechanization are scrutinized. The factors affecting quantity and quality of output are described, and attention is called to the decreasing importance of the effort and ability of the individual worker. These facts are most significant for vocational psychology; for in many industries, tests of aptitude would be futile, either because one applicant can learn the work as readily as another, or because real aptitude for the work can only be ascertained after long experience on the job. One basis for classifying industries and jobs is according to the rôle the human factor plays in determining output. Criteria useful in measuring the contribution of the worker's own efforts and ability are suggested. Qualitative criteria are becoming more important than the quantitative in indicating the ability and effort of workers. The psychological results of mechanization are described as they affect the worker's attitude toward his work. Monotony does not inhere in the repetitive job as such. The inter-relations of repetition and monotony, attention, fatigue, output and the interest of the worker in his work are described, and certain researches fundamental to the advance of technopsy-

chology are recommended.—*A. W. Kornhauser* (Chicago).

429. **Meyerheim, H. Psychotechnik der Buchführing.** (Psychotechnique of bookkeeping.) *Indus. Psychotechn.*, 1927, **4**, 173–181.—The writer discusses the nature of bookkeeping work and the qualities it demands. He mentions a number of ways for increasing the efficiency of the work, including the use of various machines.—*A. W. Kornhauser* (Chicago).

430. **Mira, E. Laboratorio de psicologia.** (Psychological laboratory.) *Anal. d. l. Sec. d. Orient. Profes. d. l. Esc. d. Trab.*, 1928, **1**, 58–82.—The work of the Psychological Laboratory of the Barcelona Institute of Vocational Guidance has centered about the following considerations: (1) An investigation, qualitative and quantitative, of the mental aptitudes which the work of each profession requires, so that it can be realized with the greatest benefit and with the minimum use of effort; (2) a classification of vocations in accordance with these aptitudes; (3) a determination of the psychic aptitudes of the examined individual and their comparison with the average previously established for each profession. After years of research certain types of motor skills and mental abilities are selected as being necessary to the skilful performance of a profession. Factors of knowledge and its application, interests, and abilities combined with the degree of physical development serve as the bases of classification. The appendix includes questionnaires and forms utilized in the work of the Institute which throw further light upon the methods used.—*J. W. Nagge* (Clark).

431. **Moede, W. Die Richtlinien der Leistungspsychologie.** (Guide-lines of the psychology of performance.) *Indus. Psychotechn.*, 1927, **4**, 193–209.—The concept of central importance for industrial psychology is that of performance (*Leistung*). In the study of performance, attention must be directed to individual differences, group influences, and individual development. Both general principles and special studies of particular individuals and groups are needed. A series of examples follow, each with illustrations from the field of industry. The propositions have to do with the diminishing effectiveness of repeated stimulation, Weber's law, a subjective optimum, persistence of one's working set, and the relationship of individual and group work with special reference to the importance of concomitant movements. A final section discusses the decline in workers as they grow old—and the parallel change in families and nations.—*A. W. Kornhauser* (Chicago).

432. **Moisescu, M. Psychotechnik des Zeitnehmens in der Werkstatt: Vergleich verschiedener Zeitmessinstrumente und Zeitmessverfahren.** (Psychotechnique of timing in the workshop: a comparison of different time-measuring instruments and procedures.) *Indus. Psychotechn.*, 1927, **4**, 97–121.—The satisfactoriness of time measurements was found to depend not only on the measurement methods but also on: (1) the nature and duration of the event timed, (2) the observer (including practice-effects), (3) the measuring instrument, (4) surrounding conditions. Illustrative results are given to show the effects of each of these four influences. Special attention is devoted to the effects of differently constructed time-pieces. Keeping the foregoing factors in view, the investigator compared three types of timing procedure: (1) in which the clock is stopped and started (*Stopp-Prinzip*), (2) in which the time is read without stopping the clock (*Durchlauf-Prinzip*), (3) in which time intervals are counted in beats (*Abzähl-Prinzip*). The first two methods prove superior to the third; but each has some points of usefulness.—*A. W. Kornhauser* (Chicago).

433. **Polakov, W. N. Influence of illumination on accident rate.** *Person. J.*, 1928, **7**, 1–11.—The author brings out the importance of proper illumination and gives instances where modernization of illumination brought decreases in accidents and increases in production. He stresses the fact that intensity of illumination cannot be considered apart from the kind of light. Fine detail work does not demand brilliant illumination—a soft white light of moderate intensity proves far more satisfactory and prevents eye fatigue. An artificial light of spectral value approximating sunlight will reduce accidents, increase production, reduce spoilage, and prevent unnecessary eyestrain.—*A. W. Kornhauser* (Chicago).

434. **Poppelreuter, W. Psychologische Begutachtung der Erwerbsbeschränkten.** (Psychological guidance for the industrially handicapped.) *Handb. d. biol. Arbeitsmethoden*, ed. Abderhalden. Abt. VI, Methoden der experimentellen Psychologie, Teil CI, Heft 6. Berlin, Wien: Urban & Schwarzenberg, 1928. Pp. 369–552. M. 10.—Since the war the questions of diagnosing and retraining those soldiers who suffered injuries to the brain has assumed tremendous proportions in Germany. Poppelreuter reports the fundamental concepts which underlie the establishment of the various institutes devoted to the study of such cases. A historical summary of the various institutions of this type and the men connected with them is given and the relation between the vocational guidance clinics for normals and those for men suffering from injuries to the brain is discussed in detail. The methodology used in these clinics is described; two methods are used—the "principal" or "inner," and the "executing" or "outer" method, the latter being concerned with the problem of the experimental work, while the former treats of all the general theoretical considerations of the method. The concept of abnormals as merely one extreme of a normal distribution curve is accepted, and the statistical methods employed are discussed. Various types of tests used and the reasons for using them are taken up, and the various interpretations put on the responses are reviewed. The construction of a psychological "work test" (as opposed to a performance test) emphasizes 13 different "principles," i.e., measurement of both time and score of the work performance, accurate and detailed description, division into "work types," multiplicity both of work tests and of the diagnos-

ticians, avoidance of such instructions as will invalidate the results, by putting the emphasis on a part of the performance which the subject himself would not emphasize, test should be real work in order to afford oportunity for an adjustment to a real situation, establishment of definite criteria, possibility of repeating tests, establishment of judgment standards, test should be so constructed that the testee can see the results of his work, as often as possible it should be possible to construct "work curves" from the "work tests," and there should be careful instructions to the testee. The third chapter discusses the special methods used; although no special tests for the industrially handicapped existed, material was presented by the same methods as are used in other psychological tests. The tests of sensitivity, motor ability, dexterity, and intelligence which are used are described. Besides these, certain other tests, all of which may be classified as types of reaction tests, are reported. The type of organization under which tests are administered is described. The fourth chapter deals with the manner of advising the industrially handicapped in the light of the "work test" results and any other information. The difficulties attendant on the recommendation of a trade for those whose handicap has been tested are discussed, and there is likewise a brief comment on the method of taking measures after the dismissal of the case. An appendix presents the blanks on which results are recorded, together with the transcripts of the records of several actual cases. —*D. E. Johannsen* (Clark).

435. **Soler y Dopff, C. La exploracion medica en la orientacion profesional.** (The medical examination in vocational guidance.) *Anal. d. l. Sec. d. Orient. Profes. d. l. Esc. d. Trab.*, 1928, **1**, 32–58.—An account is given of the part played by the medical examination in the work of vocational guidance at the Barcelona Institute. Some of the diagnostic tables used in the work are offered to the reader. Much misery, both mental and physical, will be saved if the youth can only be informed of his physical limitations which may seriously hamper his pursuit of certain professions. A professional hygiene is the aim of the Institute.—*J. W. Nagge* (Clark).

436. **Trias de Bes, L. Laboratorio medicoantropometrico.** (Laboratory of medical anthropometry.) *Anal. d. l. Sec. d. Orient. Profes. d. l. Esc. d. Trab.*, 1928, **1**, 16–31.—On the founding of the Institute of Vocational Guidance of Barcelona in 1920, it was necessary to determine what part the laboratory of medical anthropometry should play in the peculiar functions of the Institute. It was resolved that an adequate medical examination of the individual involved must constitute a preliminary and compulsory phase of the vocational orientation. The results of the medical examination do not advise the future worker what profession he must pursue, but only advise him which not to follow, after having an account of his state of health and organic development. The function of the medical director is to determine the type of professional activity most adapted to the physical disposition of each individual, and to remove those individuals from possible contact with the future professions which offer only chances of maladjustment. The necessity of basing the problem of medical orientation upon definite and systematic norms has brought about a determination of physical limitations and compatibilities in relation to each profession. A study of various occupations in Barcelona has allowed the gathering of data which has brought about a cataloguing of physical requirements for each.—*J. W. Nagge* (Clark).

437. **U. S. Federal Board for Vocational Education. Trade and Industrial Series No. 35.** Washington: Gov't Printing Office, 1928. Pp. 34. $0.10. —*W. S. Hunter* (Clark).

438. **[Various.] Beruf und Charakter.** (Occupation and character.) Berlin: Max von Kreusch, 1928. Pp. 68. $3.50.—*W. S. Hunter* (Clark).

439. **Weiss, E. Leistung und Lebensalter.** (Performance and age.) *Indus. Psychotechn.*, 1927, **4**, 227–245.—Test scores are reported for unskilled workers, railway guards, and locomotive engineers. Each group comprised several hundred adults ranging in age from about 20 to 60. Intellectual performance declined steadily from the age of 30; sensory performances and tasks requiring dexterity remained fairly constant to about 45 or 50 years and then fell off sharply.—*A. W. Kornhauser* (Chicago).

440. **Werboff, A. F. Arbeitsplatzstudie in der Holzindustrie.** (A study of the work-place in the wood-working industry.) *Indus. Psychotechn.*, 1927, **4**, 121–124.—Time and motion study techniques were used in arriving at improved methods of work in the manufacture of packing boxes in Leningrad.—*A. W. Kornhauser* (Chicago).

441. **Woldt, R. Die Fabrik als Umwelt des Arbeiters.** (The factory as the worker's environment.) *Zsch. f. Völkerpsychol. u. Soziol.*, 1928, **4**, 161–181.—A factory has three characteristics: (1) from the standpoint of economic process it is organized for mass production; (2) as productive method, machines assume constantly increasing importance; (3) work is organized on the plan of division of labor. Following this statement of factory characteristics the author offers an historical and sociological discussion with respect to factory work, mentioning the work of Taylor and Gilbreth and the development by Münsterberg and his followers of psychotechnology. The author concludes that the general tendency of factory work is to mechanize workers. Bibliography.—*J. R. Kantor* (Indiana).

[See also abstracts 95, 110, 388, 461.]

CHILDHOOD AND ADOLESCENCE

442. **Alpert, A. The solving of problem-situations by preschool children.** *Teach. Coll. Cont. Educ.*, No. 323. Pp. x + 69.—Problem situations paralleling very closely those employed by Köhler with champanzees except that toys instead of fruit were the goal, were used with 44 children attending the Nursery School of the Institute of Child Welfare Research at Teachers College. The age range of the children was 19 to 49 months. Typical case reports

are given, together with summary tables and interpretations of apparent general trends. Primary criteria of insight are given as changes of facial expression and posture, tempo and precision of work, and verbalization, with transfer and retention as secondary criteria. Various types of responses—primitive, random, exploration and elimination—are noted and described, together with a study of their relationship to various types of solutions—immediate, those with gradual insight, and those with sudden insight. Failures are qualitatively analyzed. It is concluded that a child's solving activity was more definitely determined by the nature of the problem situation than by any other factor. Exploration and elimination proved to be most frequent and most fruitful of solutions. Insight is a *sine qua non* for solution. Insight is probably not, however, necessarily always complete or stable before the solution. Transfer and retention seemed to indicate both the presence and amount of insight. Emotional, temperamental, and mental factors—i.e., the total personality—are correlated with successful solution. The correlation between mental age and achievement in the problem series was found to be + 0.266. A series of practical applications to educational procedure is given.—*H. H. Remmers* (Purdue).

443. **Chadwick, M. The child's early discrimination between sound and speech.** *Psyche,* 1928, 32, 58–72.—We have ample evidence that the infant can appreciate sounds at an early age. Sounds at first call up emotional response in the child without the assistance of associative links. But at first the sound of a person's voice soon becomes a symbol of that person, a sort of vibration pattern which is established before the child knows what is meant by the sound; and this is true not only of voices but of other sounds. At length these vibration patterns gather to themselves meaning. Soon the child discovers that sounds produce certain results—a sound is made and an effect is produced. If the child makes the sound he feels a mastery from the result. He becomes a real tyrant and demands action upon his producing words. Those who have never discovered this power for themselves may prove to be backward in learning to speak. Soon the child learns to discriminate between words themselves and their results when spoken. This leads to discrimination. Very rarely does the child make a mistake and ask for the wrong thing; a blunder is soon discovered and discouraged by its results. It is very unfortunate if a child is thrown only with one who speaks but little or who is illiterate, because he is dependent upon imitation of the sounds around him. Again, if a child becomes used to a vibration pattern in a certain association, frequent change of the said relation is apt to produce backwardness in his development. Communicating his ideas should become a matter of interest to the child if his ability in speaking is to increase. Fear or dislike may become a hindrance to learning to speak. We may learn something of our own peculiarities of speech by listening to our little imitators.—*T. R. Garth* (Denver).

444. **Chapin, H. D. Heredity and child culture.** [Rev. ed.] New York: Dutton, 1928. Pp. 293. $2.50.—The original edition appeared six years ago. The author has contributed to medical and social phases of child care for many years and writes with the perspective of experience and accomplishment. Topics considered are organic and social inheritance; selective breeding; the beginning of life; the developing period; the pre-school age; the school child; wider functions of the modern school; mental, moral and nerve culture; the importance of proper nutrition; the family; the dependent child; the adoption of children, and the prolongation of human life through child culture. The book is essentially a popular discussion. It will serve as an introduction to problems of child welfare for elementary classes in sociology in high schools, junior colleges, or study groups of parents.—*N. Fenton* (California Bureau of Juvenile Research).

445. **Cramaussel, E. Expériences au jardin d'enfants.** (Experiments in the kindergarten). *J. de psychol.,* 1927, 24, 701–718.—82 children ranging from 4 to 7 years of age were placed in various experimental situations aimed at a determination of perception by "objective" rather than purely observational methods. The experiments upon "simple perception" comprise matching of colors, selection of the longer of two blocks, and selection of the heavier of two weights, in all of which "the children from 5 to 6½ years are at least equal to adults." "Complex perceptions" comprised selection of one of one color from a mixed grouping of colors presented under various conditions such as inversion of position, change of form, size, etc. The writer concludes that "While we adults see the grouping, the more or less dense or scattered figure, light or dark, the child sees a particular and local character, which serves for him as indication of the rest. . . ." Experiments on "simple synthetic perception" comprised discrimination of size, parallels, perpendiculars, and squares, while those on "complex synthetic perception" involved the opening of a sector to a specified angle, etc. In the experiments upon "synthetic perception" the child was clearly inferior to adults. The Müller-Lyer illusion and a few like situations showed that the mechanisms relating to these phenomena are already apparent in the child, but the manifestation of them is uncertain and increases with age. Practically all of the experiments involved choice by sample and a minimum of instruction. From the results of this experiment the writer draws several conclusions pertaining to the genetic aspects of childhood perception.—*N. L. Munn* (Clark).

446. **Dittrich, B. Die Frage des Kindes und ihre Bedeutung für die Erzieher.** (The child's question and its significance for the educator.) Stuttgart: K. Haug, 1927.—*W. S. Hunter* (Clark).

447. **Ferenczi, S. The adaptation of the family to the child.** *Brit. J. Med. Psychol.,* 1928, 8, 1–13.—It is important for parents to understand their own minds and instinctual reactions before they embark on the task of bringing up children. Adaptations which may involve traumata to the child are

those in response to the adult codes of cleanliness and sexuality. In conection with the latter an important matter is to admit to the child the erotic importance of the genital organs.—*N. Fenton* (California Bureau of Juvenile Research).

448. **Höfer, L. Wiener Kinderglaube.** (Beliefs of Vienna children.) *Wien. Zsch. f. Volksk.*, 1928, 33, 6–24.—Höfer made investigations concerning chiefly the popular beliefs, superstitions, etc., of the children. The plan of the work is encyclopedic; it will be continued.—*A. Römer* (Leipzig).

449. **Lechler, A. Vom jugendlichen Irresein.** (Adolescent insanity.) *Volksmission*, 1928, **9**, 103–109.—The blame for adolescent insanity can never be put upon religion. Cause and affect are often erroneously interchanged. An illness, when already broken out, causes delusions. On the question of attributing the insanity to spiritual forces, the author opines that there is no sufficient foundation for such an hypothesis.—*A. Römer* (Leipzig).

450. **Piaget, J. Judgment and reasoning in the child.** New York: Harcourt, Brace, 1928. Pp. viii + 260.—The volume was translated from the French by Marjorie Warden, and the work was done in collaboration with Mlles. Cartalis, Escher, Hanhart, Hahnloser, Matthes, Perret and M. Roud. There are five chapters, of which the last is a summary of the present volume and *Language and Thought in the Child* (see I: 169) of which it is an extension. By having the children complete sentences containing *because* and *although*, and by observing their spontaneous use of these words, it was ascertained that up to 7–8 these relations are not present, being equivalent for the child to *and* and *but*. By carefully examining the mental processes concerned with answering simple arithmetic reasoning problems, it appeared that no account could be given of these processes even when correct, and that when pressed the child simply invented some process and believed he had used it. Starting from the Binet three-brothers test of absurdity, the brother relation, the right-left relation, and the part-whole relation (city and country form) were investigated, and it was determined that the young child is quite incapable of handling these. A chapter on *How the Child Reasons* demonstrates that the child is incapable of generalization because the bases of judgment are as yet only juxtaposed, not arranged in hierarchies; assimilation vs. imitation and the ability to effect logical multiplication are discussed at length. Throughout, two critical points are distinguished, one at 7–8 years, the other at 11–12 years; before the first, the child's thought is so completely egocentric that he cannot place himself outside his own viewpoint, and his logical inadequacies are shown to proceed uniformly and ultimately from this circumstance. The factor which tends to undermine this egocentrism is the growth of socialization, which by the second critical period has progressed to such an extent that logical processes approximating those of the adult are made possible.—*R. R. Willoughby* (Clark).

451. **Piaget, J. Psycho-pédagogie et mentalité enfantine.** (Psycho-pedagogy and child mentality.) *J. de psychol.*, 1928, **25**, 31–60.—The following problems are discused: the relation between child and adult mentality, the biogenetic law and the functional concept of intelligence, the technique of experimentation in child psychology, and, finally, the relation of child psychology and pedagogy. Piaget thinks that "it is necessary to consider as child mentality the group of intellectual characteristics which decrease in importance with mental age and with socialization, and consider as adult mentality the group of characteristics which increase in importance with mental age and socialization. Our thesis as to the specificity of child thought signifies only that these two groups of characteristics do not constitute progressive manifestations of the same process, but are due to two different tendencies," namely, egocentricity and socialization. For example, "the unintelligent adult will manifest adult mentality only in aspects of his mentality which have been socialized . . . and will remain childish in unsocialized aspects. . . ." The writer criticizes the theory of recapitulation as it has been applied to child mentality. "While admitting that functions of thought comprise certain invariables," he says, "we believe that childish thought differs from adult thought in its structure. The thought of the child is spontaneous thought . . . its operations imply the existence of a motor substratum grossly adapted to the physical world, but they are refracted; from that time thought is raised above this purely organic plan, by a self which refers everything to itself and to its desires. . . ." The transition to adult thought is brought about by objectification which is in turn a function of socialization of the self. Questionnaire and test methods are discussed, and certain pedagogical applications of the study of child mentality are pointed out. The active type of school is lauded.—*N. L. Munn* (Clark).

452. **Rengier, P. Zu Lindsey und Evans "Die Revolution der modernen Jugend."** (On Lindsey and Evan's "Revolt of modern youth.") *Mädchenbildung auf christlicher Grundlag*, 1928, **24**, 292–297.—On youth, as described by Lindsey and Evans, religion has no influence. Rengier believes, in contrast, that Christianity brings the inward turning toward God. Lindsey's unfortunate instructions cannot be authoritative for us.—*A. Römer* (Leipzig).

453. **Römer, A. Die Erlebnisgrundlage im Morgengebet des Zehnjährigen.** (The experiential foundation in the morning prayer of the ten-year-old.) *Zsch. f. Religionspsychol.*, 1928, **1**, 63–81.—A study which developed out of practice. Experiences were: the passing of the old day, the duty to give thanks for protection, and the supplicatory forethought of the new day.—*A. Römer* (Leipzig).

454. **Stern, C., & Stern, W. Die Kindersprache.** (4th Ed.) (The speech of children.) Leipzig: Barth, 1928.—*W. S. Hunter* (Clark).

455. **Vidoni, G. Quoziente mentale e condizioni fisiche nei giovani anormali.** (Mental quotient and physical condition among abnormal young boys.) *Riv. di psicol*, 1928., **24**, 111–114.—The relation of the intelligence quotient to certain anthropometric

measurements of 50 school children is reported.—*T. M. Abel* (Illinois).

456. **von Lupke, H. Zur Seelenkunde der ländlichen Jugend.** (Psychology of rural youth.) *Dorfkirche,* 1928, **20**, 548.—*A. Römer* (Leipzig).

457. **Wallin, J. E. W. The education of handicapped children.** Boston: Houghton Mifflin, 1924. Pp. 150. $2.25.—After an experience of about 15 years in directing psycho-educational clinics and the training of special-class teachers, in supervising special classes, and in familiarizing himself with the literature, the author summarizes in this book the conclusions he has reached regarding the public school training of various kinds of handicapped children, particularly the backward and mentally deficient, the social and economic consequencies of feeble-mindedness, and the social and institutional care required by the mentally deficient. The technique of organizing special classes of various kinds, the criteria for differentiating mentally deficient and backward children, the objectives of special classes, the conditions on which their succesful administration depends, the course of study, and the qualifications required by special-class teachers, are set out in detail. The necessity for more thoroughness in the study and differentiation of deviating children is stressed. The book aspires to serve as a practical guide for special-class teachers, school administrators, psychologists, and others working with mentally handicapped children. Its companion volume, *Clinical and Abnormal Psychology,* deals with mental examination methods, and the most prevalent sensori-motor, intellectual, and emotional abnormalities found in juveniles and adults.—*J. E. W. Wallin* (Miami University).

458. **Wright, J. D. The little deaf child.** New York: Wright Oral School, 1928. Pp. 161. $1.00.—This book is written for the parents of deaf children. It is an attempt to tell them how to educate the deaf child during the first five or six years of his life at home, before the beginning of formal school education. The author stresses the necessity for some special education as soon as deafness has been discovered. About 33% of deaf children have some residual hearing and this should be utilized as far as possible from the very beginning of the child's life. Very few children are totally deaf. The child who possesses residual hearing must be taught to hear. Lip reading must be started at once when the residual hearing is not sufficient, and the mother can teach the child to interpret many speech-movements at an early age. The teaching of speech is much more difficult and should be taken up later. Simple exercises in speech are given.—*R. Pintner* (Columbia).

[See also abstracts 19, 238, 249, 278, 299, 312, 315, 378, 466, 482, 499, 503.]

EDUCATIONAL PSYCHOLOGY

459. **Bathurst, J. E. Do teachers improve with experience?** *Person. J.,* 1928, **7**, 54–57.—Age and experience of 171 high school teachers were compared with scores in the Aptitude Tests for High School Teachers, by Bathurst, Knight, Ruch and Telford, which were used as a measure of teacher efficiency. The zero order coefficient of correlation between experience and score was .15; between age and score, .06; between age and experience, .88. Teacher efficiency decreases slightly with age if experience is kept constant, and increases slightly with experience if age is kept constant.—*A. W. Kornhauser* (Chicago).

460. **Bear, R. M. Factors affecting the success of college freshmen.** *J. Appl. Psychol.,* 1928, **12**, 517–523.—The subjects were 172 freshmen at Centre College. The Otis Higher Examination was used. There is a tendency to correlation between intelligence score and academic average. Sons of salesmen and skilled artisans are high, sons of farmers and business men rather low; the order in both traits by expected majors, from high to low, is teaching, engineering, business, general, medicine. Non-athletes are higher than athletes; Kentucky boys are lowest in intelligence, but are near the average of non-Kentucky boys in academic average. Younger students are rather consistently better than older ones in both traits. The author suggests that intelligence and purpose are the chief factors contributing to college success.—*R. R. Willoughby* (Clark).

461. **Book, W. F. Newer personnel practices in colleges.** *Person. J.,* 1928, **7**, 38–53.—The author shows how personnel work in colleges arose to counteract the unfortunate effects of massed instruction, by giving each student more individual attention and how college personnel departments are organized and what they attempt to do. He describes a study of the factors which determine success among college students, what adjustments the students themselves are making to these factors, and how this adjustment can be greatly improved and efficiency increased by principles imparted in a special "How to Study" course.—*A. W. Kornhauser* (Chicago).

462. **Commins, W. D. Does education increase original differences?** *School & Soc.,* 1928, **28**, 488–490.—The author approached the problem of whether education increases original differences by two methods: (1) by correlating the I.Q.'s and A.Q.'s of 227 fifth-grade pupils, and (2) by studying the dispersions of the E.Q.'s, I.Q.'s, E.A.'s and M.A.'s. He found the dispersions of the E.A.'s and A.Q.'s to be less than those of the M.A.'s and I.Q.'s, respectively. The correlation obtained between I.Q.'s and A.Q.'s was —.50. It is concluded that education is a leveling influence.—*H. L. Koch* (Texas).

463. **Crawford, A. B. Extra-curriculum activities and academic work.** *Person. J.,* 1928, **7**, 121–129.—Students at Yale University were classified into those engaged in extra-curriculum activities and those not so engaged, and into those who were self-supporting and those who were not. Both in scholastic averages and in the correlation between grades and mental ratings, the students in activities make a significantly superior showing. Those neither in activities nor self-supporting make the lowest records of all. Further detailed analysis of the different specific activities shows the students engaged in non-athletic pursuits to outrank the athletes somewhat, both in mental ratings and in grades. The

author concludes that legislation tending arbitrarily to curb extra-curriculum activities would prove harmful, unless more ideal intellectual and curricular means of stimulating students are first developed.—*A. W. Kornhauser* (Chicago).

464. **Feingold, G. A. Scholarship, attendance and deportment.** *School & Soc.*, 1928, 28 333–335.—Two classes involving 1,444 students were followed for 4 high-school years. A very close and direct relationship was found between scholarship, regularity of attendance, and deportment as measured by a system of demerits for different types of rather serious class-room offenses.—*H. L. Koch* (Texas).

465. **Freudenberg, S. Erziehungs- und heilpädagogische Beratungsstellen.** (Clinics for education and mental hygiene.) Leipzig: Hirzel, 1928. Pp. xii + 180. R. 6–7.50.—The book is divided into two parts; the first deals with the history of educational clinics and the fundamental assumptions and bases on which they have been established, together with a description of the various kinds of clinics and the methods used; the second part is a report of the work done by Leonard Seif's clinic at Munich during the past four years. The book deals with the various types of difficulties which lead to maladjustment in the children under observation in such clinics. Such difficulties may be social, as, for example, the abnormal situation of the orphan, the illegitimate child, the child of divorced parents, etc., or they may consist in physical or mental abnormalities leading to difficulties in school, etc. The methods employed in treating each type of trouble are discussed and the part played by such officials as a school psychiatrist or psychoanalyst are presented. Case studies are given to serve as examples of the type of maladjustments found and the method of treatment is indicated.—*D. E. Johannsen* (Clark).

466. **Gilbreth, L. M. Living with our children.** New York: Norton, 1928. Pp. xii + 309. $2.50.—The author, who collaborated with her husband as an industrial psychologist and in the rearing of eleven children, here describes the philosophy and something of the technique of the latter adventure. The engineering point of view is marked, together with some influence of earlier attitudes in psychology. The philosophy is essentially that of the newer education—education through extensive participation on the part of every member of the group, on a basis of equality. The book has three sections: planning, performing, evaluating. Full weight is given to intangible values, mechanization being invoked only so far as it brings freedom.—*R. R. Willoughby* (Clark).

467. **Highsmith, J. A., & Beam, M. S. Why college freshmen fail.** Greensboro: North Carolina College for Women, 1928. Pp. 22.—In a preliminary study concerning the factors which contribute to college freshman failures, based upon the records of 417 freshmen at the North Carolina College for Women, "reading or study ability appears to be of more importance than teachers' judgments, gap between high school and college requirements, intelligence, high school content, and high school marks. The results of experiments in training to study seem to warrant the hope that in the development of such training lies a partial solution of the problem of freshman failures." 44 references.—*L. W. Gellermann* (Clark).

468. **Holmes, A. Physical education in making personality.** *Amer. Phys. Educ. Rev.*, 1928, 33, 464–468.—*R. Stone* (Clark).

469. **Howes, E. D. P., & Beach, D. The cooperative nursery school; what it can do for parents.** Northampton: Smith College, 1928. Pp. 74.—*W. S. Hunter* (Clark).

470. **Katz, D. Student opinion at Syracuse.** *Person. J.*, 1928, 7, 103–110.—Samples are given of the questions and self-ratings used in a survey of student attitudes at Syracuse University. A few preliminary results are cited regarding cribbing, personal ideals, and religious adjustment.—*A. W. Kornhauser* (Chicago).

471. **Knight, F. B., & Behrens, M. S. The learning of the 100 addition combinations and the 100 subtraction combinations.** New York: Longmans, Green, 1928. Pp. xiii + 82. $1.00.—"The problem is in question form: How much practice is needed by typical second-grade children to learn the 100 addition and the 100 subtraction combinations? A minor problem is: How much practice is needed by second-grade children to keep from forgetting these 200 learned basic facts?" By means of a technique based upon enlightened practice, the learning of each combination by each child was directed, and also recorded in terms of accuracy, of rate, of maintenance, and of errors in the connections formed. Upon evidence resulting from intensive study of 25 and of 15 children's responses yielding over 100,000 and 60,000 specific data for addition and subtraction respectively, tables are presented revealing "general difficulty rank of each of the combinations, the number of practices needed by the 50th and by the 80th percentile pupil to master them, the average time of practices for permanence, and the average errors (number and instances) made in learning. Intercorrelations reveal the inner consistency of these data. These Knight-Behrens difficulty rankings of addition and of subtraction combinations (1) in comparison with those of Clapp, who based his rankings upon the study of errors (inherent difficulties plus unknown amounts of previous practices) of fifth-grade children, show a correlation of approximately + .66; (2) but in contrast with the Clapp rankings, the Knight-Behrens rankings square up with other known facts of human learning, in that they substantiate relationship: (a) between the difficulty of an addition combination and its reverse (explained to some extent by the hypothesis 'the size of the sum,' and by the table making more 'summarized' thinking possible), (b) between companion subtraction combinations, and (c) between related addition and subtraction facts."—*W. M. Perry* (Nebraska).

472. **Krünegel, M. Heilpädagogik als autonome Wissenschaft.** (Correctional pedagogics as an autonomous science.) *Hilfsschule*, 1928, 21, 146–156.—The author tries to prove that normal pedagogics and psychopathology are basic sciences of correctional pedagogics, and that not by their combination

but rather by their interpenetration a unique thought and experiential context, correctional pedagogics, is developed as a new form. In this science it is impossible to make a practical separation between what is derived from normal pedagogics and what comes from psychopathology. At the end the author makes a plea for the establishment of a faculty for correctional pedagogics largely because correctional pedagogics is based on unique laws.—*O. Seeling* (Berlin).

473. **Lazarsfeld, S. [Ed.] Technik der Erziehung: ein Leitfaden für Eltern und Lehrer.** (The technique of education: an introduction for parents and teachers.) Leipzig: Hirzel, 1928. Pp. viii + 350. R. 11–13.—This book is divided into five parts, the first section containing three essays on the fundamental concepts of modern education, while the last is a series of five chapters under the general heading "Topics relative to all age-groups." The remaining three groups of subjects are: "Infant and young child," "The school-child," and "Puberty." The latter section, because of the recent developments in the field, is perhaps the most interesting and important. It consists of four chapters, "The philosophy of the adolescent," "The sexual and erotic problem," "Physical education," and "Vocational guidance." The book is a joint production of several leaders in the field and is planned, as the title suggests, to be a comprehensive summary of the more recent experimental work on children, both "difficult" and normal.—*D. E. Johannsen* (Clark).

474. **Lehman, H. C. Does it pay to change initial decisions in a true-false test?** *School & Soc.*, 1928, **28**, 456–458.—The findings indicate that the superior student, when taking a true-false examination, not only reverses his decisions in regard to the answers less frequently than does the inferior student, but the former also tends to raise his score by those reversals he sees fit to make, whereas the latter tends to lower his standing thereby.—*H. L. Koch* (Texas).

475. **Liefmann, E. Pädagogische und medizinische Gedanken über die körperliche Strafe in der Schule.** (Pedagogical and medical ideas on corporal punishment in school.) *Zsch. f. päd. Psychol.*, 1927, **28**, 331–346.—The author reviews the problem of corporal punishment, discussing the arguments pro and con. He concludes that the objections from both a psychological and a medical standpoint demand a further legal restriction of corporal punishment in the school, and makes specific proposals for statutory enactment in his state of Baden.—*F. N. Freeman* (Chicago).

476. **Meadows, L. R. A study of the teaching of English composition in the teachers' colleges of the United States.** *Teach. Coll. Cont. Educ.*, No. 311. Pp. viii + 95.—By means of college catalogues, personal visitation of classes in different institutions, a study of textbooks, reference books and magazines, examination of term examination questions, composition projects, themes, books on teaching composition, questionnaires and conferences, experimental classes, and 40 stenographic reports of composition classes in teachers' colleges, the author sought to establish present practices and problems in the teaching of composition. 68 state teachers' colleges in 29 states are included in the study. Paralleling the sources of the data there are seven groups of conclusions, totaling 45 in number. A suggested course of procedure is given, viz., "that the composition teacher devote one hour a week to the entire class . . ., that the class be divided into fifteen [equal] groups . . . for conference work . . . and the third hour, now being devoted to classroom work by the students, be spent in building up a better background through reading." The advantages of this plan are discussed. A form letter used in the study, together with a questionnaire and a bibliography of 160 titles, are appended.—*H. H. Remmers* (Purdue).

477. **Nelson, M. J. The abilities and achievements of elementary school pupils before and after a vacation.** *School & Soc.*, 1928, **28**, 371–372.—Arithmetic, spelling, reading, and intelligence tests were given grades 3A, 5A, and 7B at the close of the spring term and at the opening and close of the fall term. During the vacation period greater gains in intelligence occurred among the pupils in grades 5A and 7B than during the fall term. The vacation, on the other hand, caused a loss or stasis in school achievement in all subjects and in all grades, except 7B reading. During the fall term achievement in all school subjects showed a gain and, with the exception of spelling, a gain greater than one would expect in 15 weeks. The pupils in 3A also gained more in intelligence than they did in the summer. From June to September the increase in intelligence and in 7A reading and arithmetic was greater than is normal for a 30-week period. In the other school subjects the improvement was less than normal.—*H. L. Koch* (Texas).

478. **O'Brien, F. P. Mental ability with reference to selection and retention of college students.** *J. Educ. Res.*, 1928, **18**, 136–143.—Results from the University of Kansas. The Terman Group Test of Mental Ability was given to fourth-year high school students. The college careers of those who entered college were followed. The results showed little significance in mental ability differences for those who completed college and for those who did not. The author concludes: "It appears from the facts at hand that the colleges are really successful neither in attracting nor holding the mentally fit."—*S. W. Fernberger* (Pennsylvania).

479. **Paterson, D. G. Use of new type examination questions in psychology in the University of Minnesota.** *School & Soc.*, 1928, **28**, 369–371.—There have been collected at the University of Minnesota 2,261 new-type examination questions which cover the material presented in the introductory course in psychology at that institution. These questions were analyzed by the author in an effort to discover: (1) the extent of the emphasis given various topics in the course; and (2) the types of questions which most successfully differentiate levels of student ability.—*H. L. Koch* (Texas).

480. **Pepper, M. The Winnetka technique.** *Welfare Mag.*, 1928, **19**, 1053–1061.—A description of the individualized and socialized form of instruction in the Winnetka (Illinois) schools.—*L. Ackerson* (Institute for Juvenile Research).

481. **Pressey, L. C. The permanent effects of training in methods of study on college success.** *School & Soc.*, 1928, **28**, 402–404.—Using the method of parallel groups, the author attempted to investigate the effect of a course in methods of study upon the scholastic careers of probation students in college. It is concluded that students below the first quartile in intelligence do not profit sufficiently from the training to keep themselves in school. Those in the three upper quartiles do learn to study, usually stay in school as a result, and give a rather creditable scholastic performance.—*H. L. Koch* (Texas).

482. **Ranschburg, P. Die Lese- und Schreibstörungen des Kindesalters. Ihre Psychologie, Physiologie, Pathologie, heilpädagogische und medizinische Therapie.** (Disorders of reading and writing in childhood: psychology, physiology, pathology, curative-pedagogic and medical therapy.) Halle a.S.: C. Marhold, 1925. Pp. 314.—Part I treats methods of measurements; researches of the author and his students concerning the correlations of the reading and writing abilities with school progress, intelligence, age and perceptual type; norms for reading and writing; backwardness in reading. Part II treats childhood alexia (congenital or familial alexia) with detailed analysis of a case studied by the author. This disorder is generally incurable. Contrasted with it is legasthenia in normal children, in which the difficulty with the alphabet is in most cases quickly overcome, the difficulty with syllables and words causes retardation of 2 to 4 years, and independent reading is attained at age 10 at least. In Parts III and IV the author presents his theory as follows: The cause of disorders of reading and writing is not morphological aplasia of the centers or their connections; the cause is that the energy (oxygen) supply is not great enough for centers in which many elements are acting simultaneously. This is named quantitative or distributive inhibition. In childhood alexia the shortage is due to congenital undevelopment of the artery which supplies the optical center for alphabetic forms. The author surveys also fusional or homogeneous inhibition, discussed in Germany as "Ranschburg's inhibition." This is a cause of errors and disorders of reading and writing and also proof-reading and typing—fusions, inversions, etc. It is caused by the mutual attraction of action currents flowing in the same direction, whose fields of force tend to fuse. If they are not to fuse, they require a special supply of energy. This theory is in opposition to the theory of the refractory phase. Another section treats affective causes of disorders of reading and writing. Part V discusses curative pedagogy, presenting the methods of Montessori and others, as well as those of the author. Subject and author indexes.—*P. Ranschburg* (Budapest).

483. **Shambaugh, C. G. A study of the vocabulary of ancient history texts.** *School & Soc.*, 1928, **28**, 494–496.—A report of a rather intensive study of five standard ancient history texts.—*H. L. Koch* (Texas).

484. **Shuttleworth, F. K. The measurement of the character and environmental factors involved in scholastic success.** *Univ. of Iowa Stud.: Stud. Character*, 1927, **1**, No. 2. Pp. 80.—This monograph represents an attempt to measure the character and environmental factors other than intelligence involved in the scholastic success of freshmen at the University of Iowa. A test battery consisting of three parts, a test of attitudes and interests, a self-rating device and a questionnaire, was given to 494 men and 269 women for whom first semester grades and four entrance examinations were available. Students who were scholastically successful were compared with scholastically unsuccessful students. The failure groups evidenced a markedly stronger liking for test items suggestive of mechanical interest; they were more conventional; in religion they were fundamentalists, standpatters and intolerant of the opinions of others; they were indifferent to test items suggestive of intellectual and cultural interests; and they showed more interest than the successful group in stimuli suggestive of pleasure-seeking interest. The failure group reported more strict religious home training. They were more dependent on social relations than the successful group. The successful group reported that their parents were very strict in early home training and much interested in their school work while the failure group reported that their parents permitted them to do as they pleased and were rarely interested in their school work. There was a marked tendency for students to over-rate their high school standing. College success was associated with participation in debate and dramatics, non-participation in high school athletics, election of Latin, French and German, non-election of agriculture and manual training, and with the presence in the home of works of art, musical instruments, magazines and newspapers. The assayer, self-rating device and questionnaire are presented in full in the appendix of the study.—*B. Wellman* (Iowa).

485. **Smith, H. L., & Wright, W. W. Tests and measurements.** Newark, N. J.: Silver, Burdett, 1928. Pp. vii + 540 + ix.—The purpose of this volume is to "bring together the objectives of the teaching of a particular subject and the measurement of the results of this teaching so far as these results can be measured in the achievements of pupils" rather than to treat tests and measurements as a separate field. It is also designed as an aid to the teacher in the use of standard tests for diagnosing pupils' difficulties and in suggesting remedial measures. The introduction presents a historical survey of the field of testing and submits four principles as working theories in the light of which educational measurement is interpreted in this book: (1) "Whatever exists at all exists in some amount," (2) scientific measurement in education is closely related to educational progress, (3) scientific measurement in education is conditioned by the objectives of education as a whole and of school subjects specifically, and (4) educational measurement is justified only by the resulting improvement in learning on the part of the child. General problems are discussed in chapters on measuring and reporting achievement, criteria for judging standardized tests, and interpreting and reporting scores. Specific fields are then taken up, arithmetic, secondary mathematics, language, reading, history and civics, etc.; in each

case the objectives are given, and the various tests evaluated in the light of these objectives. Recommended tests are listed for each subject. Practice tests, intelligence tests and prognostic and special ability tests are also discussed. Construction of the new type examinations and of achievement tests is dealt with at some length. A bibliography follows each chapter.—*L. M. Harden* (Clark).

486. **Stefansson, V. The standardization of error.** New York: Norton, 1927. Pp. 83. $1.00.—An ironic plea for lessening the regard paid to facts in our civilization and substituting "knowledge by definition." "The method of knowledge-by-definition is and long has been in standard use . . . it has the advantages of being easily grasped, picturesque, and of a higher average moral value than the so-called 'real' knowledge." The application of this theory to education is discussed with relation to various departments, particularly history and geography. As for psychology, "Psychoanalysis and especially behaviorism come near being a total loss from the point of view of character building."—*R. R. Willoughby* (Clark).

487. **Stillman, B. W. Training children to study.** New York: Heath, 1928. Pp. xix + 247. $1.60.—After pointing out the advisability of giving children "suggestions as to methods of study" the author gives the scope of the book as "an attempt to outline the work which has been done along this line in the Fifth, Sixth, and Seventh Grades of one department of the Ethical Culture School. The greater part of the book is given over to a discussion of the content subjects, history, geography, and so forth, rather than to the tool subjects." An introductory chapter on "The place of thinking in education" by Boyd H. Bode furnishes the point of departure for the ten chapters that follow. A discussion of the stimulation of the questioning attitude, helping the child to get and organize his facts, and teaching him to make the best use of his memory makes up the first five chapters. The remaining chapters deal with making ideas function, self-expression through English composition, the mastery of some of the tool subjects, and education as a process for the cultivation of attitudes. No bibliography. —*J. A. Highsmith* (North Carolina College for Women).

488. **Strang, R. Another attempt to teach how to study.** *School & Soc.*, 1928, **28**, 461–466.—A report of one method Columbia University uses in handling her failing students.—*H. L. Koch* (Texas).

489. **Symonds, P. M. The nature of conduct.** New York: Macmillan, 1928. Pp. ix + 346. $1.90. —This book is suitable for a text in the department of character education. The author holds that human conduct is the product of natural forces and should be understood in the same way as other biological reactions. Two groups are seeking the control of physical environment; the psychologists who study the factors which influence behavior and the educators who use their discoveries in actually molding the conduct of growing boys and girls. The book is intended for the use of both these classes. The study deals with conduct from a purely objective standpoint and classifies it under three heads of stimulus, peripheral, kinesthetic and visceral; and under two groups of response, muscular and visceral. In all, twelve groups of stimulus-response combinations are identified and discussed. The chief element in conduct is habit and a great deal of attention is given to this topic. "Except for certain basic habits with regard to health, thrift, and personal matters, valid habits are not known." An attempt is made to learn and understand these habit laws, for "then we would have a basis for setting up conduct objectives in education, objectives that would change as the environmental forces themselves change." Organic states and processes are discussed quite fully, but are impulsive rather than directive, so far as habit is concerned, and so are of lesser importance. Similarly, attitude and feeling are not regarded as part of any reactive system; they are "subsumed under habit" and may be largely dispensed with in defining and classifying it. "A child cannot be taught to like vegetables—he can be taught to eat vegetables and then he will like them." Another large factor in conduct is dealt with under the head of confacts. These are defined as responses to the more subtle forces of environment, and some of those treated with considerable detail are truthfulness, honesty, courage, friendliness, etc. Chapters on "Pathological conduct" and "Character and personality" are included; also more practical ones such as "Conduct codes" and "Curriculum construction in conduct."—*W. E. Slaght* (Cornell).

490. **Wiley, J. A. Practice exercises in silent reading and study.** Cedar Falls, Iowa. Author, 1928. Pp. 368.—This latest volume in the author's *Silent Reading and Study Series* is planned as the practice exercises basis for the whole series, definite instructions being given for carrying out specific practice exercises appropriate to the many objectives and principles set forth in an earlier volume, entitled *Silent Reading and Study Objectives and Principles* (see II: 1080, 1081), to which the present is intended as a companion volume. The same chapter and section titles and numbers have been retained in order to facilitate the parallel use of the two. The justification for the present book arises from the author's observation and experience that what most teachers need is specific guidance in planning and carrying out definite procedures for accomplishing the commonly accepted theoretical objectives of silent reading and study, e.g., developing skill in reading by thought groups rather than by words; in selecting relevant detail; in recognizing word meanings; in locating the most important ideas; in judging the validity of an author's statements, etc., etc. The author is convinced that theoretical understanding of these and other aims and objectives of reading and study are likely to leave the young teacher "utterly helpless" when it comes actually to put them into practice in the schoolroom. It is to supply copious suggestions for the practical application of these principles that the present volume has been written. The materials incorporated in the book may either be variously drawn upon from time to time throughout the grades, in the high school, and in the college, or be used for carrying

through a more or less continuous program during each week, month, or term.—*L. A. Averill* (Worcester Normal).

491. **Wiseman, C. R. Methods of college teaching.** *School & Soc.*, 1928, **18**, 433–434.—150 college students—largely upperclassmen—were questioned in regard to the teaching value of 31 devices. Quizzes, with the exception of the essay type, were thought very well of, as were also reference readings. The instructor was preferred in rôle of expounder and evaluator of materials assigned rather than of lecturer or leader of recitations.—*H. L. Kock* (Texas).

[See also abstracts 95, 97, 150, 279, 299, 315, 387, 423, 446, 457, 458, 507, 509, 512.]

BIOMETRY AND STATISTICS

492. **Brandt, A. E. The use of machine factoring in multiple correlation.** *J. Amer. Statis. Asso.*, 1928, **23**, 291–295.—A time-saving method of working out multiple correlations by the use of (Hollerith or Powers) punch card machinery is described.—*L. Ackerson* (Institute for Juvenile Research).

493. **Chaddock, R. E., & Croxton, F. W. Exercises in statistical methods.** Boston: Houghton, 1928. Pp. vi + 166. $1.25.—This volume is a laboratory manual containing a wide variety of problems for the student of elementary statistical method. It is intended to be used as supplementary to Chaddock's *Principles and Methods of Statistics*, though it is self-sufficient in that the exercise directions and complete tabular data are included in the single volume. In addition to nine appendices, including such useful data as tables of squares, square roots, reciprocals, sums of squares, common logarithms, transposition values for r and ρ, theoretical results of coin tossing, etc., there is included a very comprehensive list of references and additional sources of statistical data.—*F. A. Geldard* (Virginia).

494. **Elderton, W. P. Frequency curves and correlation.** (2d ed.) London: C. & E. Layton, 1927. Pp. vii + 239. 15s.—*L. Ackerson* (Institute for Juvenile Research).

495. **Merrill, A. S. Frequency distribution of an index when both the components follow the normal law.** *Biometrika*, 1928, **20A**, 53–63.—From certain mathematical considerations it appears that "for conditions ordinarily met with in practice, the frequency distribution of the index, when both components follow closely the normal law, is sensibly normal. In other cases, however, particularly in cases where the correlation is high and the coefficients of variation are large, there may be a considerable deviation from normality." "A further paper will shortly be published showing that comparatively slight deviations from the bi-variate normal distribution of x and y lead to marked divergence from normality in the index distribution . . . K.P."—*L. Ackerson* (Institute for Juvenile Research).

496. **Weld, L. R. D. The empirical basis of the theory of errors.** *Scientia*, 1928, **44**, 229–238.—The author discusses the postulates underlying the theory of errors and then tries actual data to see whether or not they are in accord with these postulates. His illustrations are two series of physical measurements, one having 144 cases and the other 303 cases. He finds that the actual data do not correspond to the values derived from the formula. Since series containing many more cases than these are seldom obtained in practice, the values of the probable error should be considered as rough approximations.—*R. G. Sherwood* (Stillwater, Minnesota).

[See also abstracts 69, 266, 505.]

MENTAL TESTS

497. **Abramson, J. Essai d'étalonnage de deux tests d'imagination et d'observation.** (An attempt to standardize two tests of imagination and observation.) *J. de psychol.*, 1927, **24**, 370–379.—450 boys and 300 girls from 8 to 18 years were subjected to two tests; one of concrete observation, such as enumerating, after a 20-minute exposure period, the objects exposed; and one of imagination, using inkblots. Similar results were obtained with both tests. The results were scaled both quantitatively and qualitatively, the results for different ages and for both sexes being compared. The ability to observe concrete objects showed large age variations in the boys and much less variation in the girls, otherwise there was no outstanding sex difference. The girls were more imaginative than the boys at all ages. The qualitative results also showed great age and sex differences, as well as differences resulting from personal and environmental diversity. A further analysis and comparison of the tests showed that, during the range of years under discussion, there are three high points for imagination and two for observation, "seeming to indicate an evolution of these two aptitudes, presenting three critical periods: the first at 8–9 years when the child made his entry into social life, the second at 13–14 years, at the time of puberty, and a third at 17–18 years at the so-called 'Sturm- und Drangperiode' of the Germans. These moments are characterized by an increase of the rate of imagination and a decrease of the ability to observe."—*N. L. Munn* (Clark).

498. **Brown, A. W. The reliability and validity of the Seashore Tests of Musical Talent.** *J. Appl. Psychol.*, 1928, **12**, 468–476.—An introductory section states the claims made for the tests by their author and the results of the two studies heretofore made upon them. In the present study the six tests were given twice, four months apart, to about 108 junior and senior high school students. The reliability coefficients were 0.71 for pitch, 0.65 for intensity, 0.48 for time, 0.43 for consonance, 0.59 for memory, and 0.29 for rhythm, with probable errors from 0.03 to 0.06. Musical instructors ranked the subjects on innate musical ability (reliability of ranking, 0.94 by re-ranking after four months); the average test score correlated 0.38 with these ranks, memory alone correlating 0.41 and all the rest below 0.18. Intercorrelations between age, test score, teachers' ranks and intelligence rating (Army Alpha and Otis) ranged from 0.38 to —.34; of the 15 intercorrelations among the tests themselves, 3 were above 0.30. Partialling out age and intelligence

from the correlation between test score and teachers' ranks lowered it from 0.38 to 0.35.—*R. R. Willoughby* (Clark).

499. **Estabrooks, G. H. The relation between cranial capacity, relative cranial capacity and intelligence in school children.** *J. Appl. Psychol.*, 1928, **12**, 524–529.—The cranial capacity was calculated by the Pearson-Lee formula, which is a function of length, breadth and height; the two forms were used for the sexes, but no correction was applied for the age of the subjects (the formula having been derived for adults). Relative cranial capacity is the quotient obtained by dividing cranial capacity by stature. Intelligence quotients were derived from the Stanford-Binet when the children were six, Dearborn A when they were seven, and Otis Primary when they were eight. All of the children were of the same age, lived in Medford and Revere (being part of the subjects of the Harvard Growth Study), and comprised 172 boys and 207 girls; subdivisions were made by race. In intelligence boys were slightly inferior to girls; Italians (brunet only considered) were low, Jews rather above average, north Europeans much above average, the brunet type being highest of all. In the correlations between intelligence and cranial capacity, boys surpassed girls (0.24 vs. 0.14); the girls' coefficients are of doubtful significance, but all positive; the only group of boys whose coefficients are conspicuously insignificant is the north European brunet. The relative capacity-intelligence coefficients are clearly insignificant with the possible exception of North European mixed boys, and one-fourth of them are negative.—*R. R. Willoughby* (Clark).

500. **Freeman, F. N. An evaluation of the evidence in Part I of the Yearbook and its bearing on the interpretation of intelligence tests.** *J. Educ. Psychol.*, 1928, **19**, 374–380.—Reviews the Chicago study of foster children and considers a gain of 10 points in IQ, due to improved home conditions, as being extremely significant. Finds the coefficient of correlation between sibs who have been separated to be about .34. Furthermore, he finds that the correlation between unrelated foster children in the same family is .37. "Thus, unrelated children in the same house resemble each other fully as much as do brothers and sisters who are in different homes." After reviewing the other phases of the report bearing on this subject the writer concludes that the scores on intelligence tests are influenced to a marked degree by the character of the home and the other circumstances which go with it.—*A. M. Jordan* (North Carolina).

501. **Froemel, W. Vergleichende Intelligenzprüfungen an 11 jährigen in Volks- und höheren Schulen.** (Comparative intelligence tests of 11-year-old children in *Volksschulen* and higher schools.) *Indus. Psychotechn.*, 1927, **4**, 251–253.—Intelligence test scores among 11-year-old children in the *Volksschule* are lower than those of children in the *Knabenmittelschule* and the *Realgymnasium*, but there is a great amount of overlapping. Only 111 students were tested.—*A. W. Kornhauser* (Chicago).

502. **Gates, A. I. Observed facts and theoretical concepts.** *J. Educ. Psychol.*, 1928, **19**, 381–388.—Discusses the 1928 Yearbook of the National Society for the Study of Education. Cites evidence to show that scores on the Binet test mean merely that children have learned directly or incidentally to perform these tests and nothing more. Thinks that methods of teaching and learning are of the greatest importance for improvement of mental capacity. The rate of learning, although determined largely by heredity, may be improved.—*A. M. Jordan* (North Carolina).

503. **Heugel, W. Handgeschicklichkeit und technische Intelligenz bei Zehnjährigen.** (Dexterity and tec[1]nical intelligence among ten-year-old children.) *Indus. Psychotechn.*, 1927, **4**, 245–249.—Scores on six tests for intelligence, dexterity, and "technical intelligence" (principally spatial thinking) were correlated with teachers' estimates in three classes. The coefficients for the separate tests range from .01 to .68.—*A. W. Kornhauser* (Chicago).

504. **Husband, R. W. The reliability of the Thorndike Intelligence Examination.** *School & Soc.*, 1928, **28**, 521–522.—The author attempts an interpretation of Cowdery's finding that the reliability coefficient of the Thorndike Intelligence Examination was .65, when computed on the basis of a retest employing another form of the test and given after an interval of three years. The hypothesis is advanced that the relatively low reliability can be attributed to the inclusion in the test of much rather strictly scholastic material. Individuals during three years have opportunity to use such information in radically different degrees. The test, moreover, standardized on a homogeneous group, magnifies slight individual differences. Three years with their inevitably varied contributions in experience must alter slightly, at least, the relative standing of many individuals. Hence, the instrument because of its very sensitiveness appears to be unreliable, when tested as described above.—*H. L. Koch* (Texas).

505. **Kemp, N. The improvement of measurement through cumulative testing.** *Teach. Coll. Cont. Educ.*, No. 321. Pp. viii + 81.—From a school population of more than 10,000 children in three New York City schools, 200 children in Grades 4 to 8 were found who had continuous test records from 1922 to 1926. The six tests used were the National Intelligence Test; Scale A; Morrison-McCall Spelling Test; Nifenecker Spelling Test; Form D; Thorndike-McCall Reading Scale; New York Standard Geography Test, Series A; Woody-McCall Mixed Fundamentals, and Otis Arithmetic Reasoning Test. All tests were restandardized on the total school population in question. The major problem was that of determining to what extent, if any, the inclusion in an average of a child's past test records would increase the reliability of measurement and prediction of future performance, when such test records are based on the currently used fallible tests administered as they were by classroom teachers. Raw scores, quotients, T scores and B scores were investigated with considerable statistical ingenuity. It was found that cumulative test records do improve reli-

ability of measurement and prediction (9 to 10% for a single averaging of two parallel forms with one other test dating 1.5 years previous) but that the law of diminishing returns operated with increase of time interval so that the "addition of results from a further and a previous year's testing adds little to the reliability of a prediction based on an average of the last two or three annual tests, and may easily detract therefrom." Two years is found to be the optimum period from which to draw for averaging. A simple unweighted average of quotients or B scores from five of the tests was found to possess a constancy over one year greater than that of the National Intelligence Scale A, and comparable with those usually reported for the Stanford-Binet Test. Kelley's statement of the similarity of functions measured by a battery of educational group tests on the one hand and our best so-called intelligence tests is corroborated. The rescaling of tests to conform to local norms and rates of progress is recommended. In view of the correlations obtained—closely comparable to those obtained by experienced psychologists—from data collected as these were, it is pointed out that the promise of future results to be anticipated from the widespread use of standard tests is most encouraging.—*H. H. Remmers* (Purdue).

506. **Kent, G. H., & Shakow, D. Graded series of form boards.** *Person. J.*, 1928, 7, 115–120.—The authors describe an improved design of the well-known Kent form boards. Its advantages lie in the high premium placed upon orderly procedure as opposed to trial and error, and the arrangement of sequence of tasks for study of practice effects. Norms are not yet available.—*A. W. Kornhauser* (Chicago).

507. **Odell, C. W. Traditional examinations and new-type tests.** New York: Century, 1928. Pp. viii + 469. $2.50.—After pointing out in detail the merits and defects of both traditional examinations and new type tests, the author concludes that both kinds should be employed in an adequate testing program. He discusses the purposes, criteria of excellence, administration and scoring of examinations, and their relation to a marking system. Chapters are devoted to various types of questions—their proper uses, practical suggestions as to their formulation, examples, etc. Each chapter is carefully summarized. A bibliography of one hundred items is appended.—*R. G. Sherwood* (Stillwater, Minn.).

508. **Radecki, W. Un test d'intelligence pour adultes.** (A test of intelligence for adults.) *J. de psychol.*, 1927, 24, 831–850.—Groups of from two to four words are presented to the subject, whereupon he must react with a word which is associated with each of the group. His reaction time and introspective report are also recorded. The scaling of the test is based on the quality of reaction, which is rated A, B, C, D, E, or F according to the type of association, and upon the reaction time. The test has not been standardized, hence the author presents it merely as a tentative one "based exclusively on the theoretical ideas of psychology."—*N. L. Munn* (Clark).

509. **Roberts, H. M., & Ruch, G. M. Minor studies on objective examination methods. I. The negative suggestion effect of true-false tests.** *J. Educ. Res.*, 1928, 18, 112–116.—A completion test was followed by a true-false test, and from one day to one month later the same completion test was given as a means of comparison. The authors find that a negative suggestion effect exists but that it is much smaller than the critics have believed *a priori*. But "the *net* suggestion effect of a true-false test appears to be *positive*, not negative."—*S. W. Fernberger* (Pennsylvania).

510. **Thompson, L. A., & Remmers, H. H. Some observations concerning the reliability of the Pressey X–O test.** *J. Appl. Psychol.*, 1928, 12, 477–494.—306 men and women, mostly sophomores, were given the Pressey X–O Form A, part of the group taking it twice, three months apart. Pronounced sex differences were found, the women in general tending to dislike more things than the men; there is some deviation from the original norms. The reliability scores for the separate tests range from 0.15 to 0.58, with the total affectivity score at 0.48 and the idiosyncrasy score at 0.39. The total scores correlate with intelligence measures and academic grades below 0.20 in all cases except idiosyncrasy vs. freshman grades (0.61). The intercorrelations of the parts of the tests are between 0.20 and 0.43. Evaluations in terms of net differential score are suggested, and the test is recommended as a clinical instrument.—*R. R. Willoughby* (Clark).

511. **Thurstone, L. L., & Thurstone, T. G. Psychological examination for high school graduates and college freshmen.** (1928 ed.) Washington, D. C.: American Council on Education.—This new form contains five sub-tests, namely Completion, Artificial Language, Geometric Analogies, Arithmetic, and Opposites. The total time limit is one hour. Last year's edition was given to 86,653 college students. Beginning with this year, the successive forms will be made comparable in score.—*L. L. Thurstone* (Chicago).

512. **Toll, C. H. Scholastic aptitude tests in Amherst College.** *School & Soc.*, 1928, 28, 524–528.—For 5 of Amherst's freshman classes and for 3 classes followed throughout their entire college course, scholastic grades were correlated with scores on at least one of the following tests: Army Alpha, Otis S-A, Terman Group, Smith College Information, Amherst Test, and 3 tests from the set constructed in 1924 by the American Council on Education. None of the tests was especially valuable for predicting scholastic standing, the correlations ranging from + .19 to + .38. The extremes of this range, interestingly enough, were found among the correlations for the Otis test, thus showing that the instrument varied in its predictive value from class to class.—*H. L. Koch* (Texas).

513. **[Various.] Subject lists of books and papers on psychological tests.** London: H. M. Stationery Office, 1928. 20s.—*W. S. Hunter* (Clark).

[See also abstracts 110, 225, 230, 267, 388, 474.]

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